

Appl. No. 09/227,742; Filed: January 8, 1999  
 Pkt. No. 0942.4770003; Group Art Unit: 1636  
 Inventors: Bloom et al.; Tel: 202/371-2600  
 Title: Method for Increasing Viability and Transformation  
 Efficiency of Bacteria During Storage at Low Temperatures

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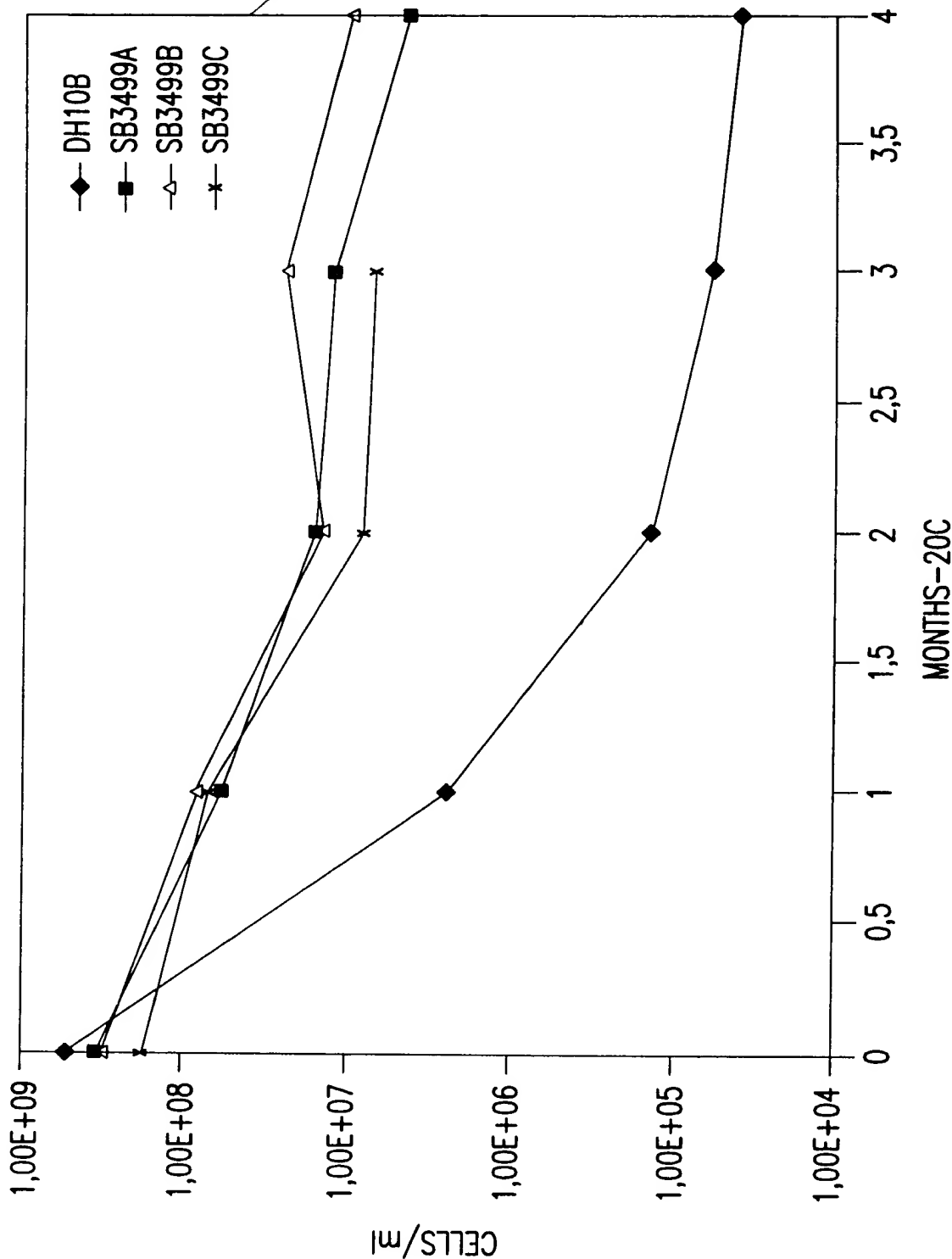


FIG.1



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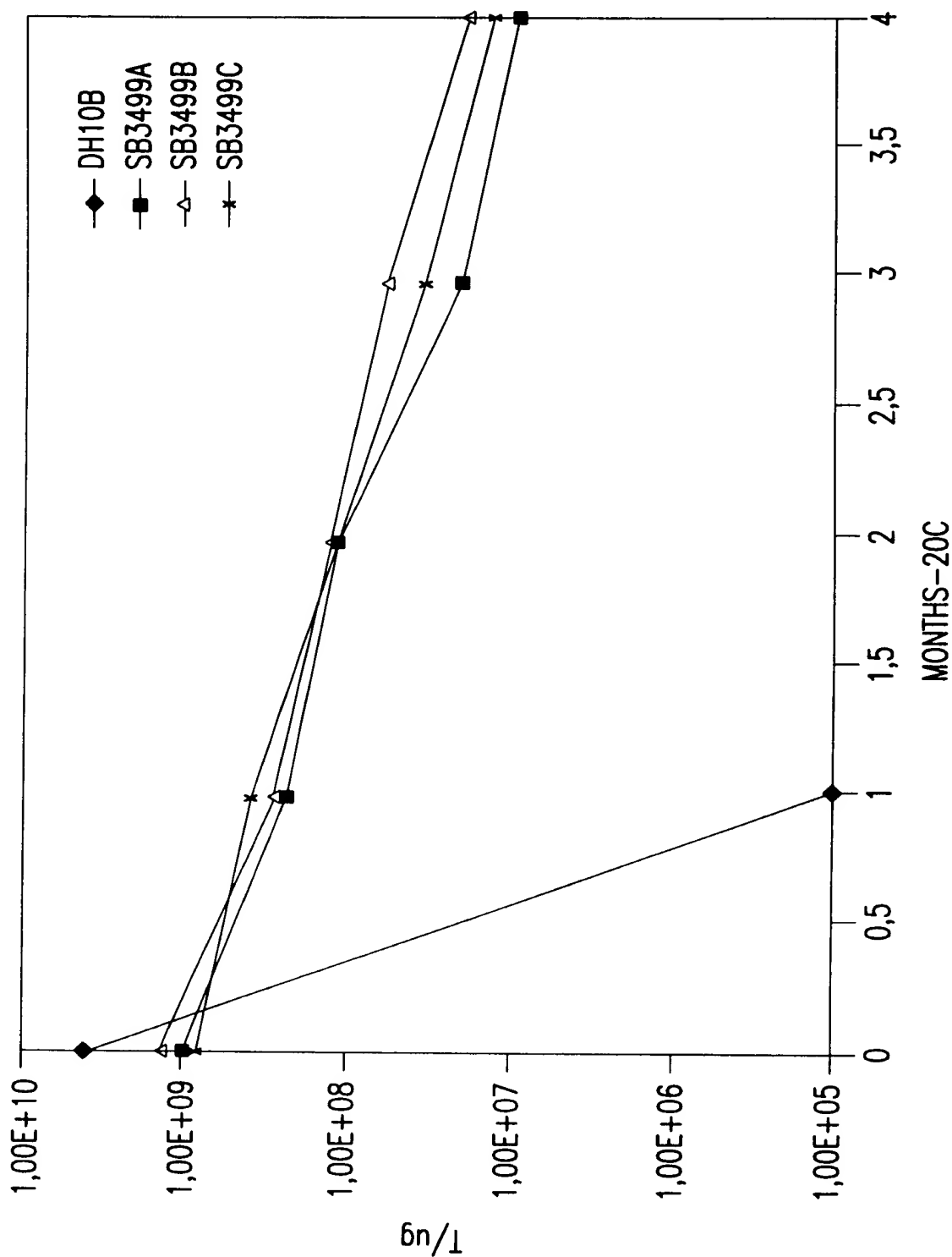


FIG.2



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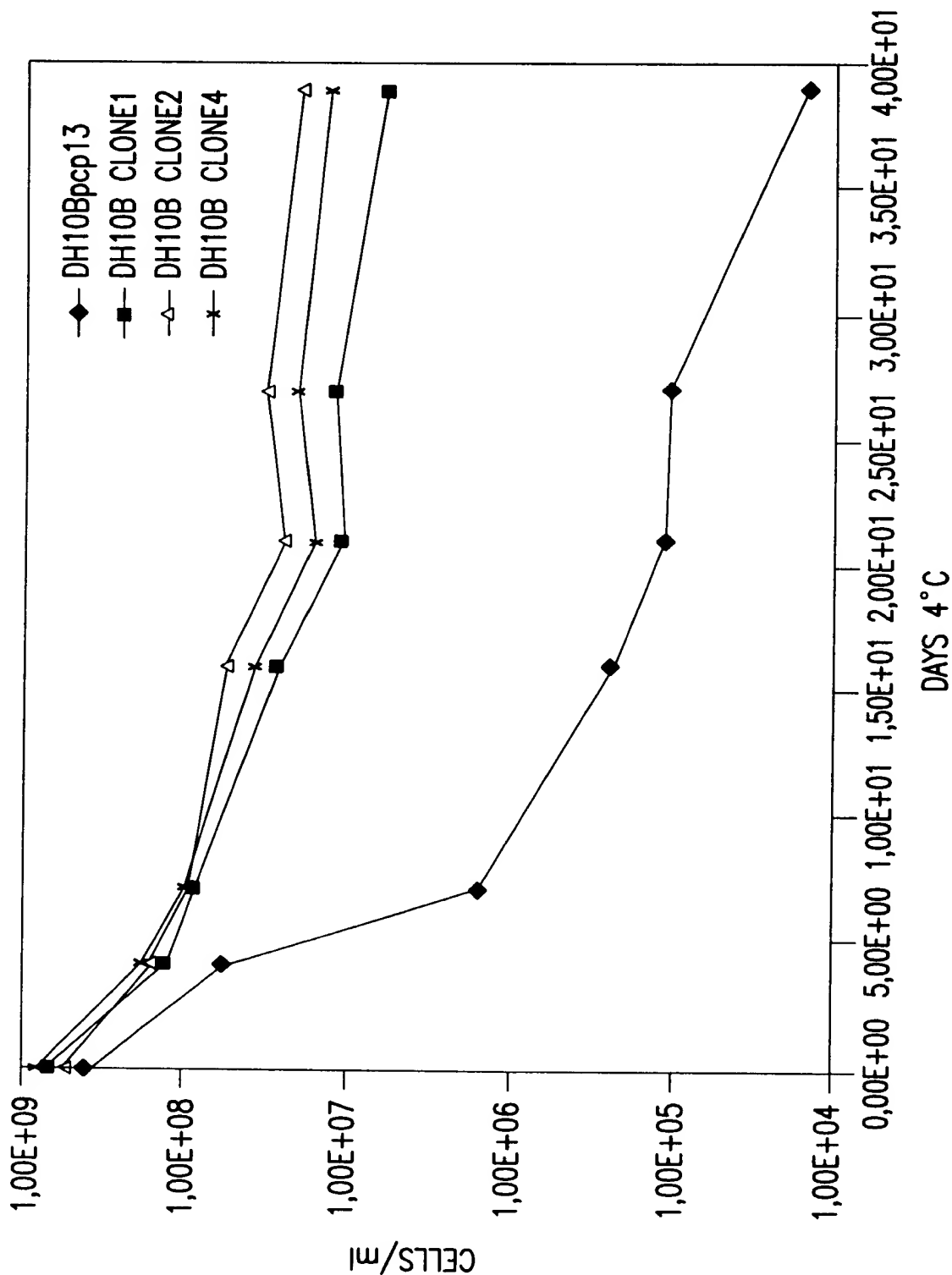


FIG.3



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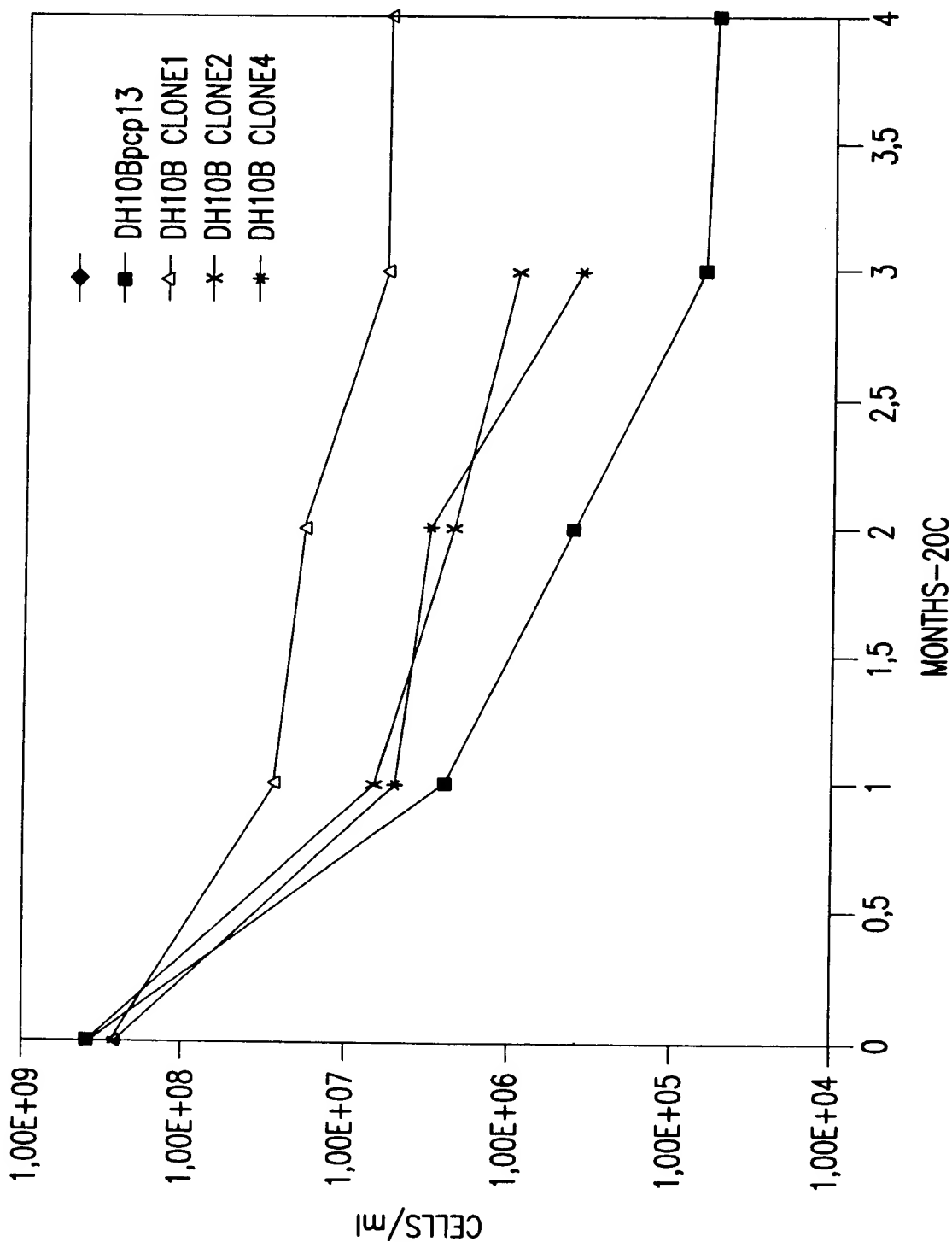
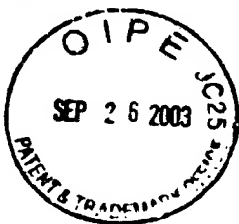


FIG.4A



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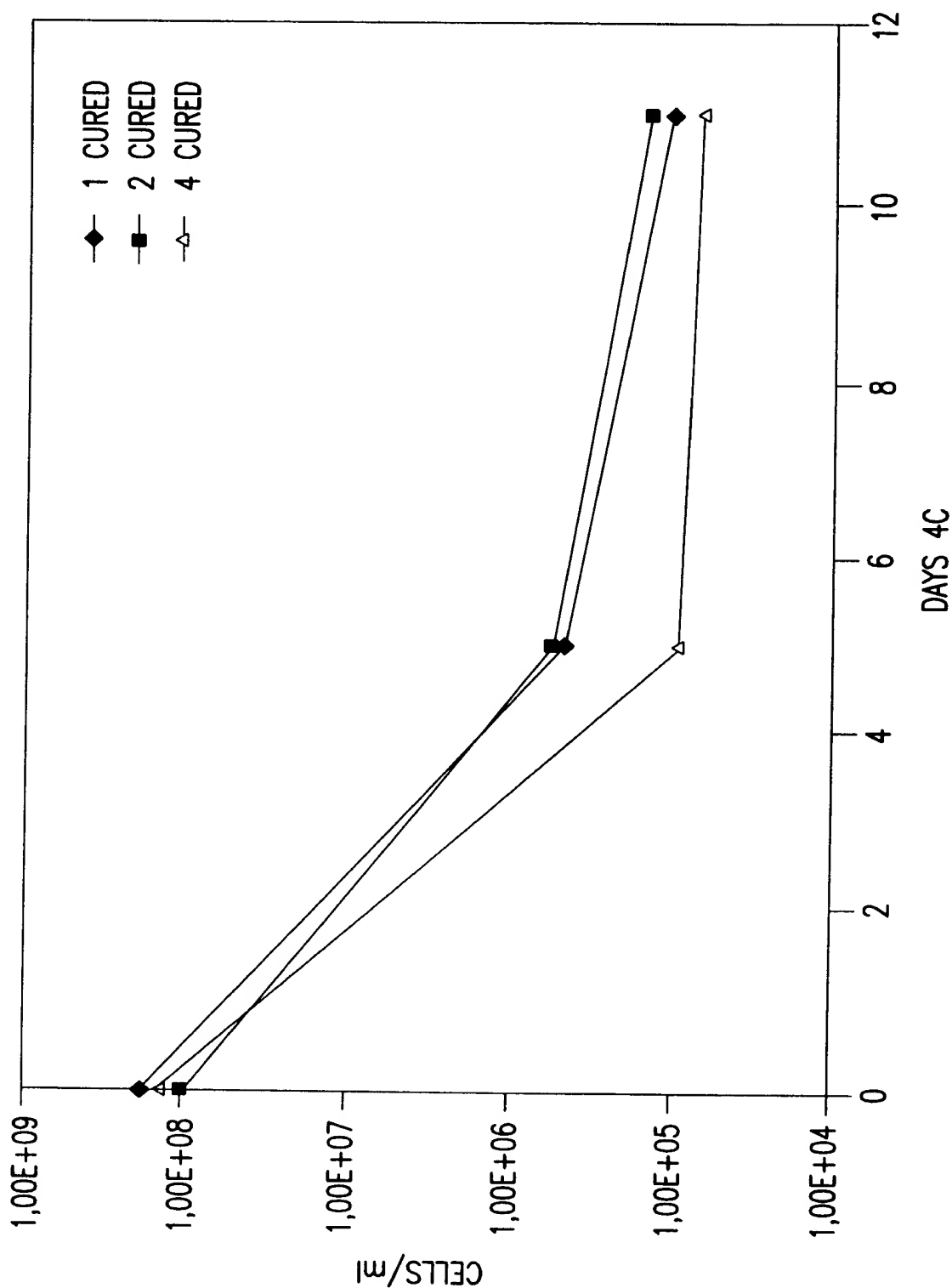


FIG.4B



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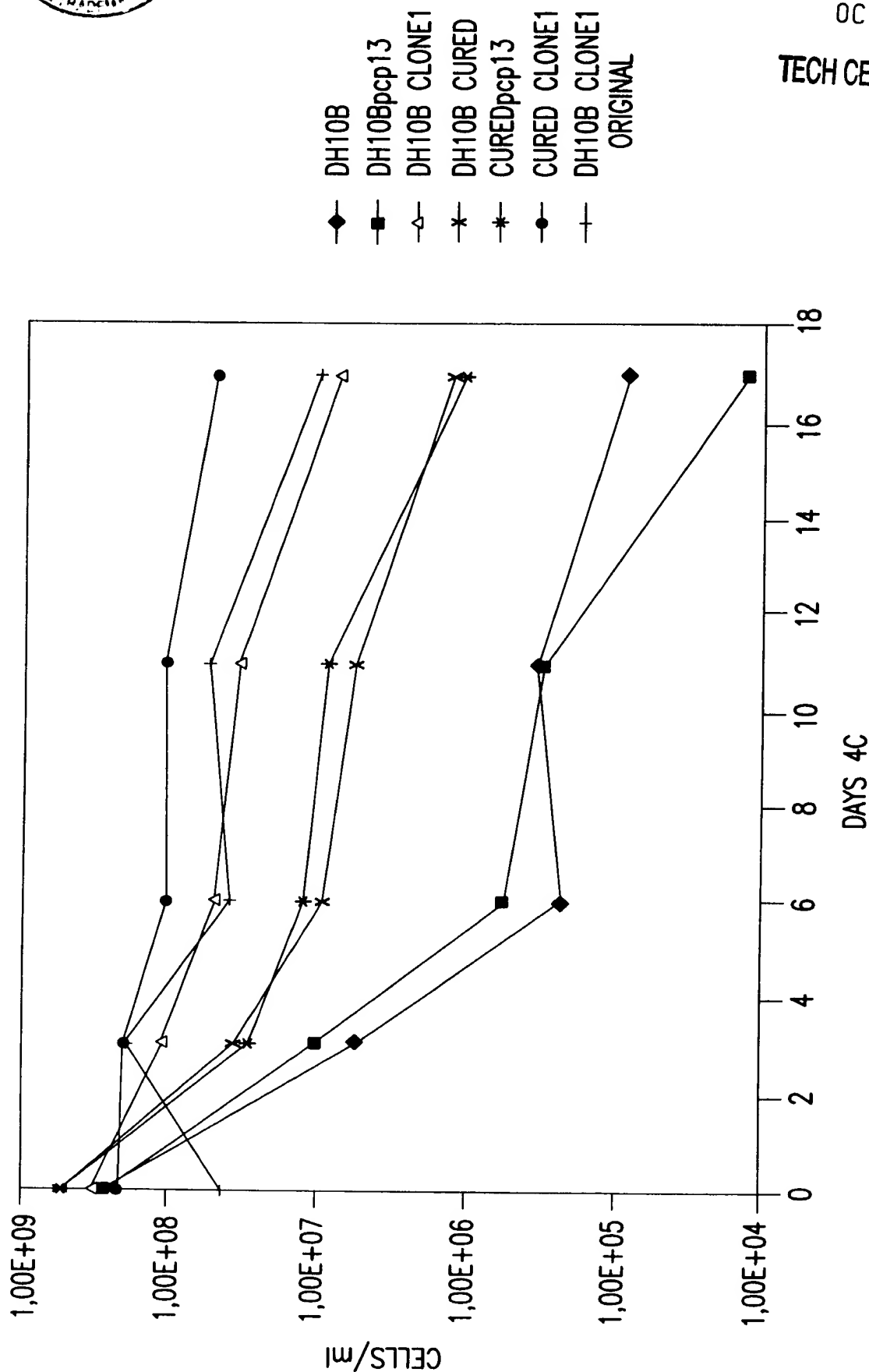


FIG.5



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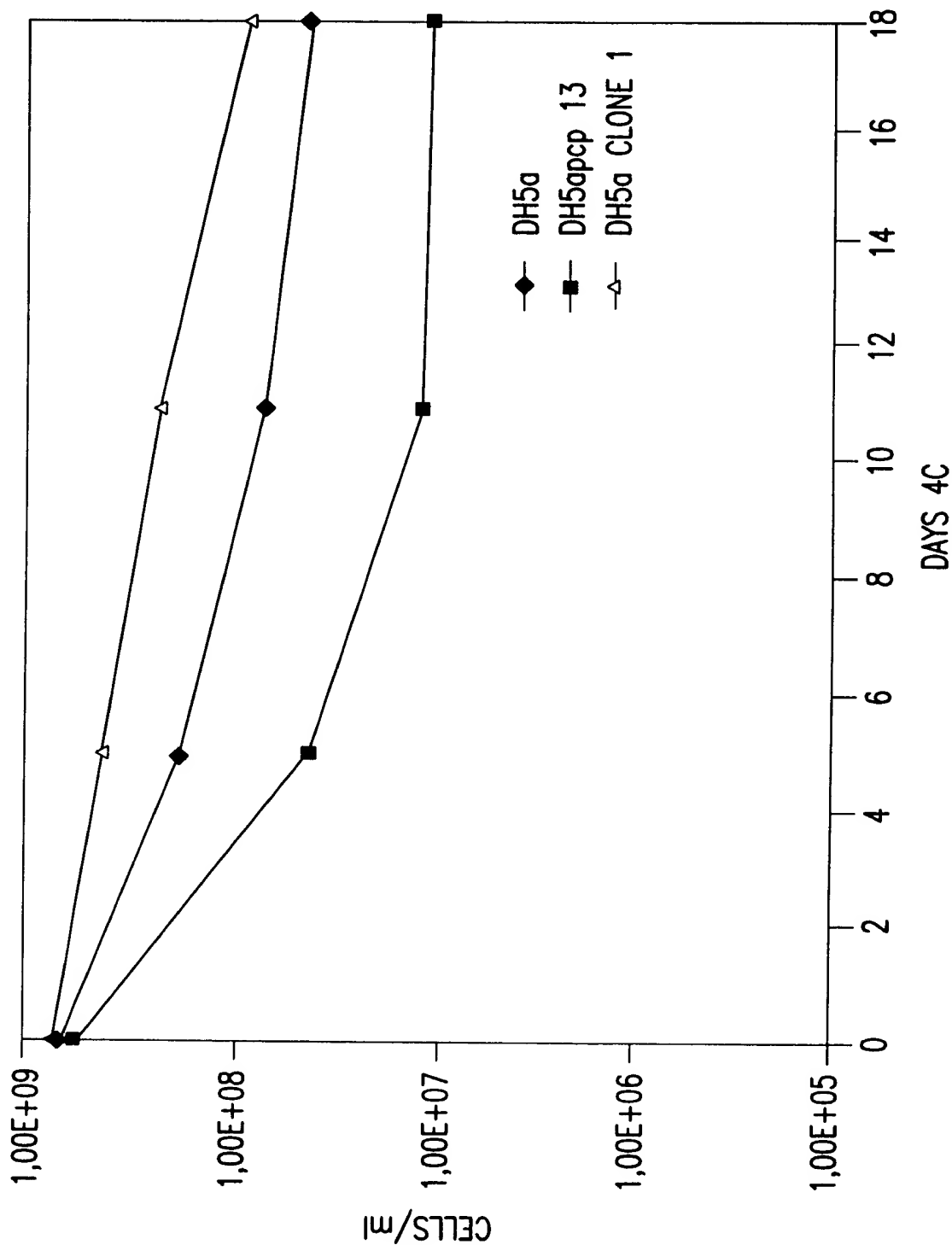


FIG. 6A



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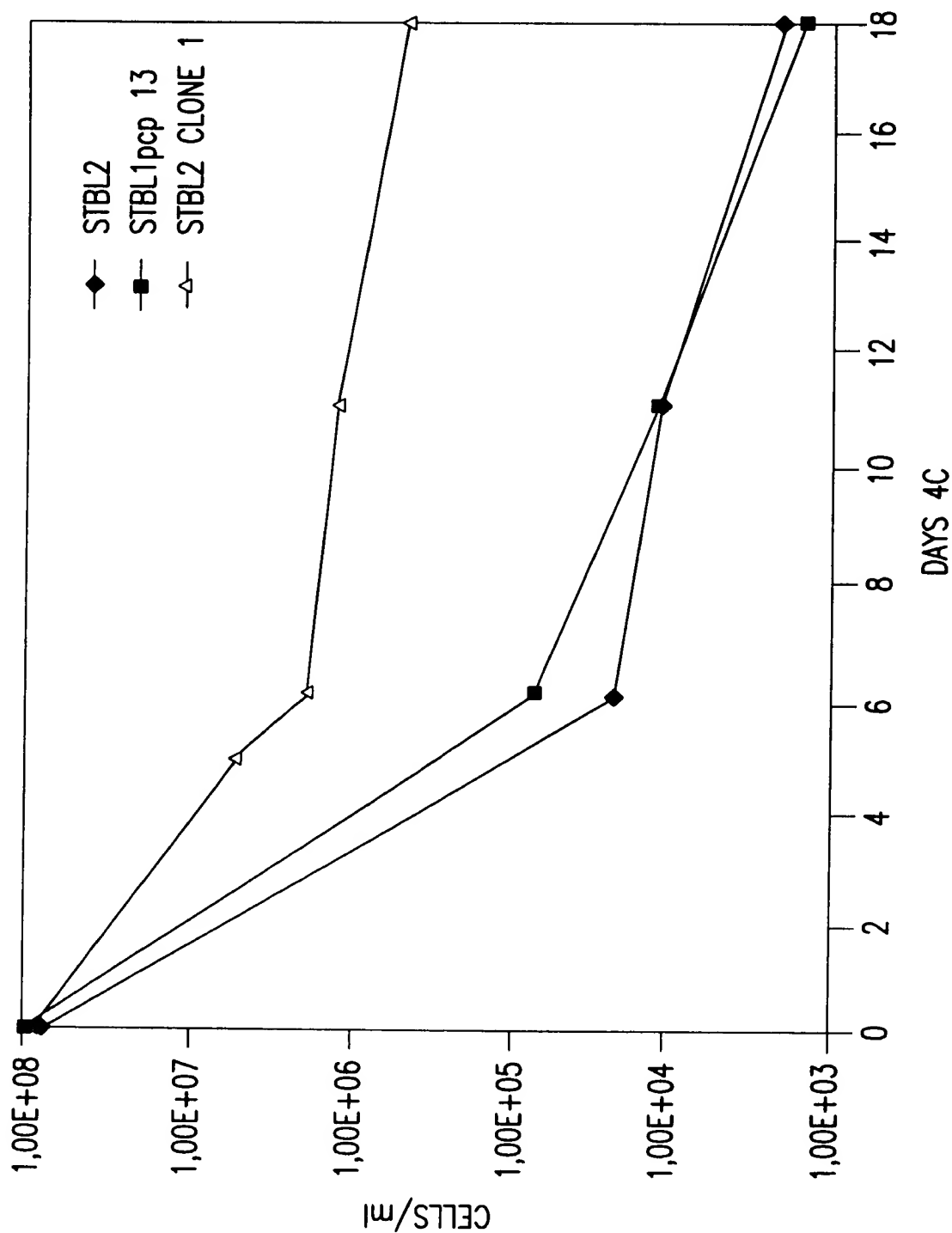


FIG.6B





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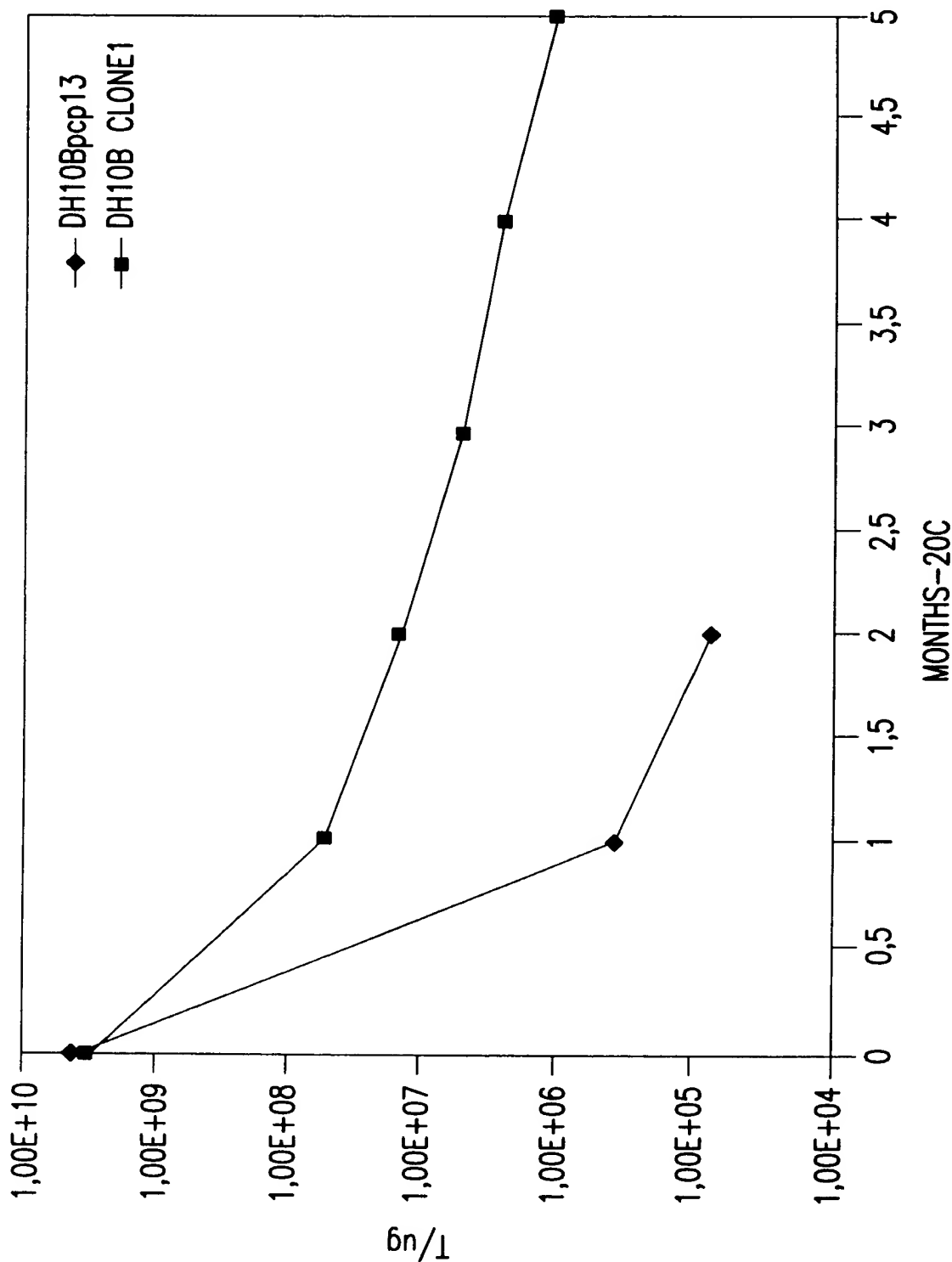


FIG.7

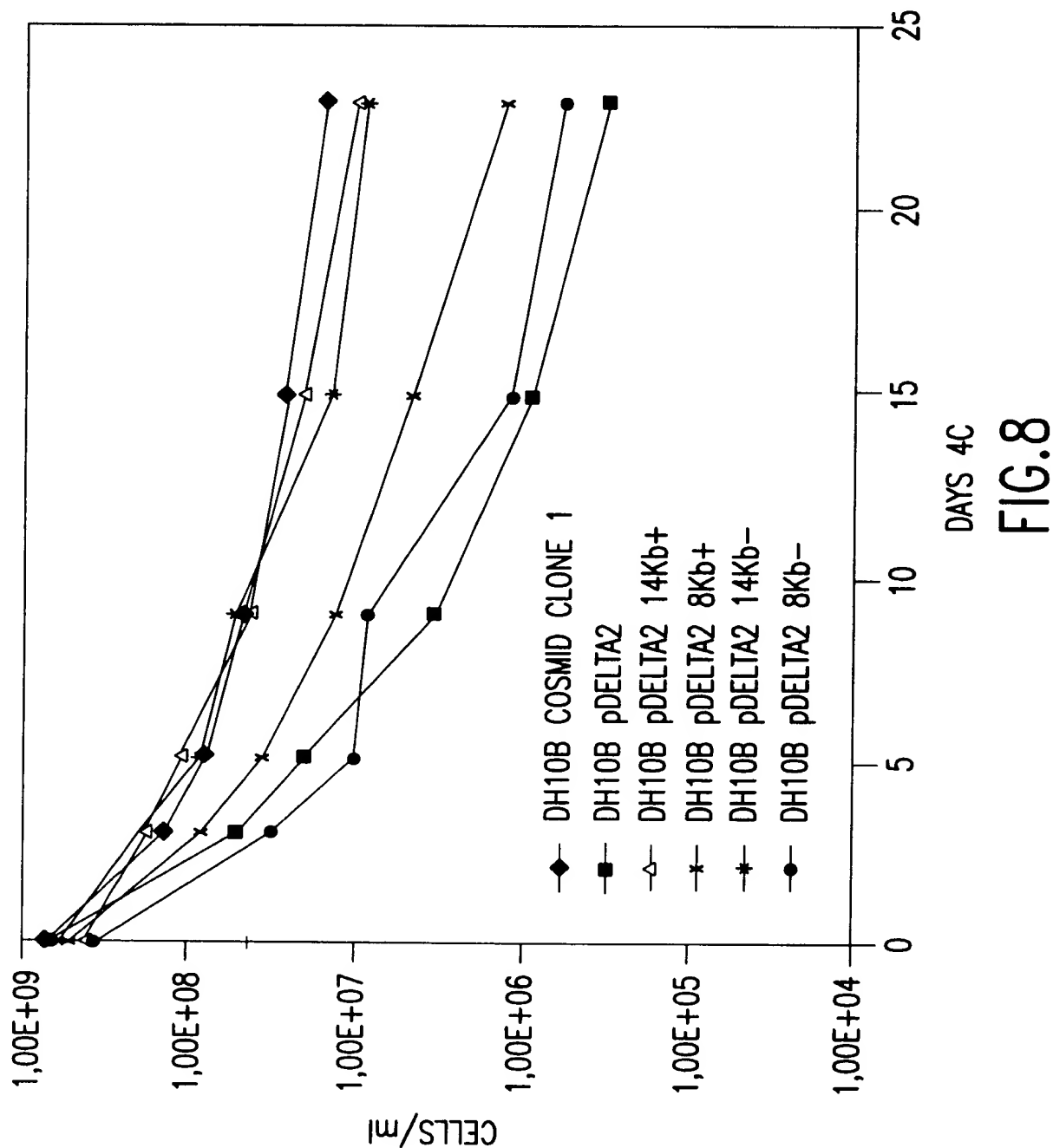


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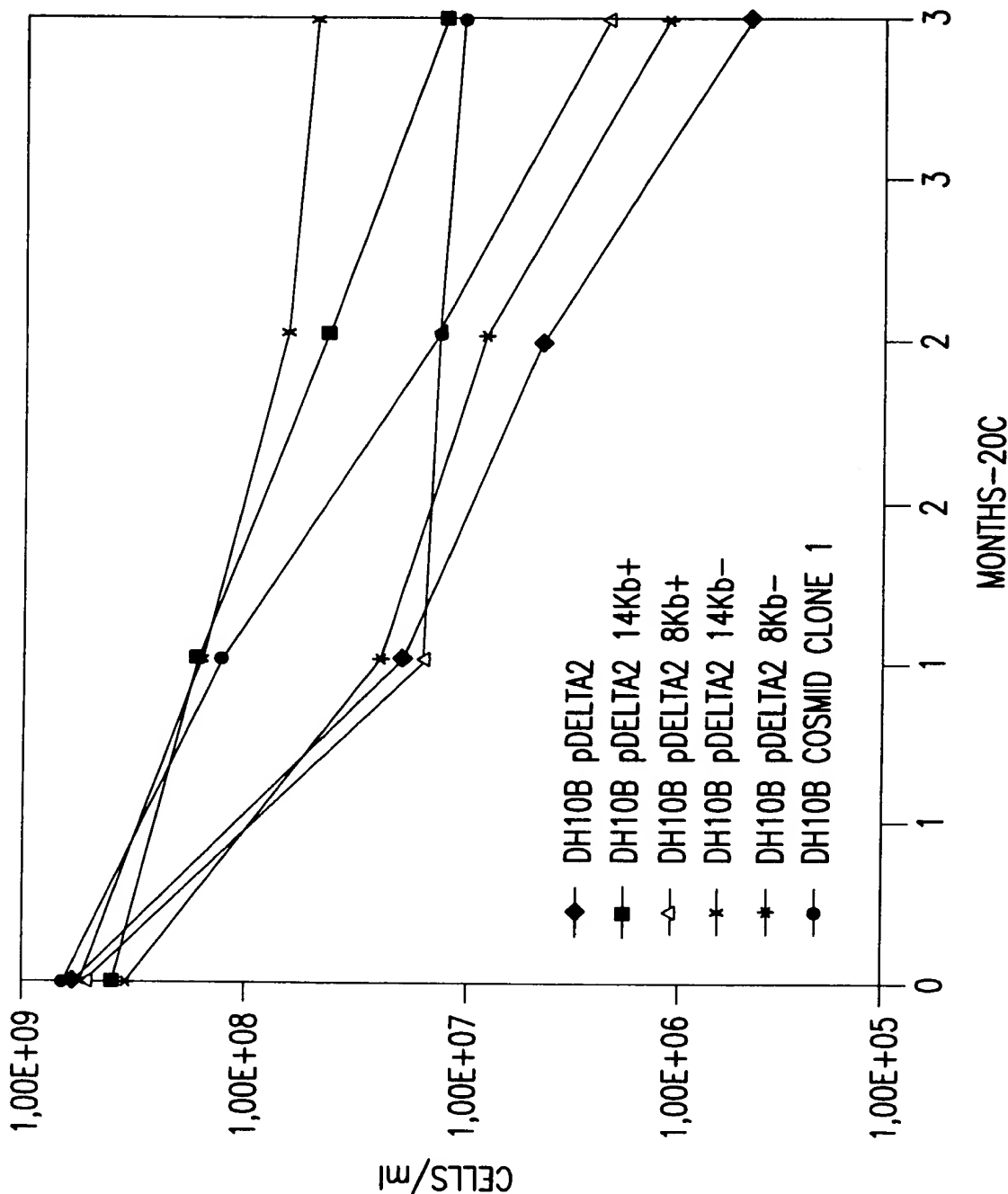
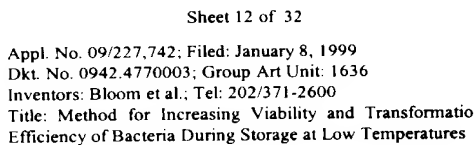
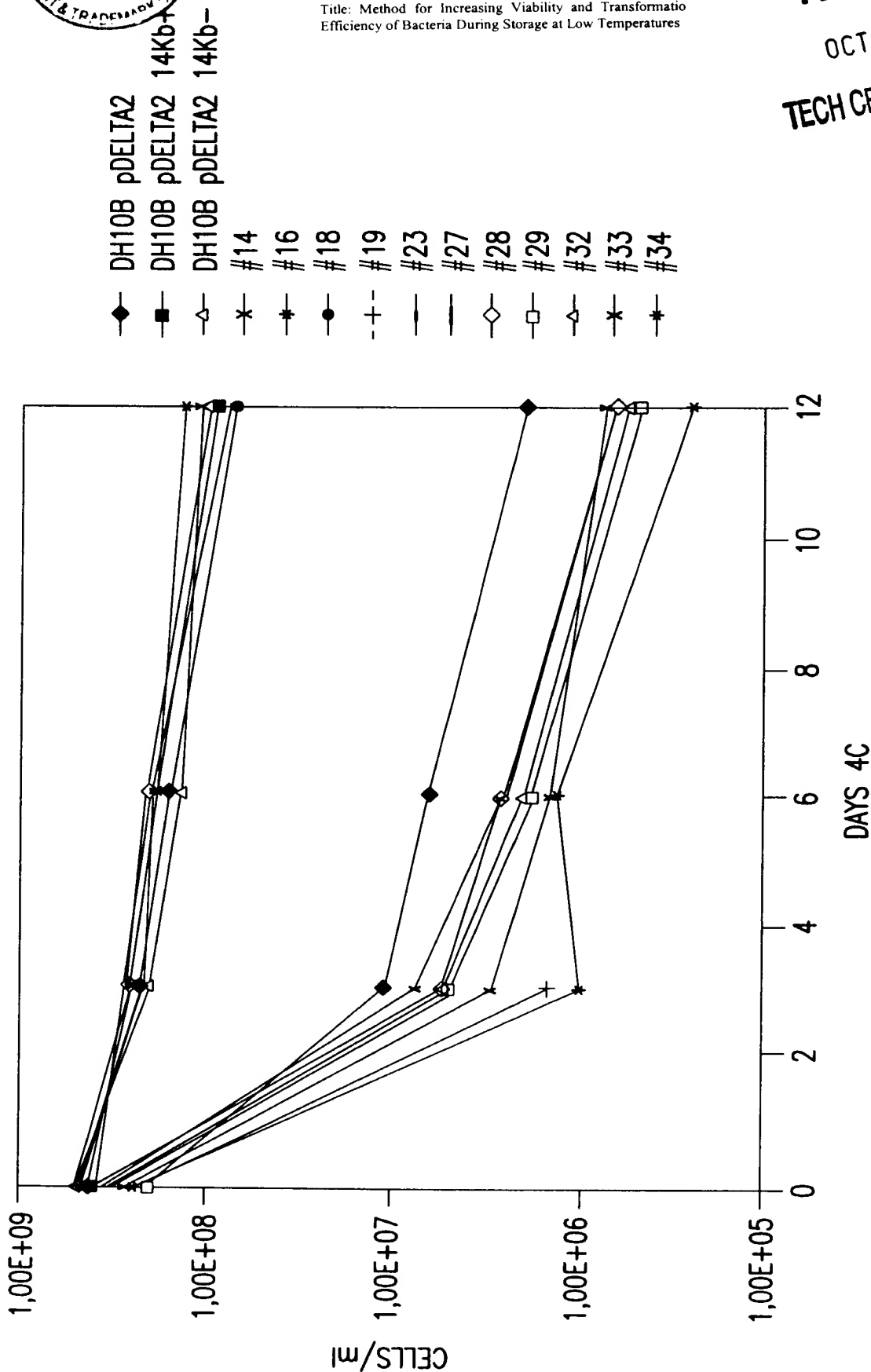


FIG.9



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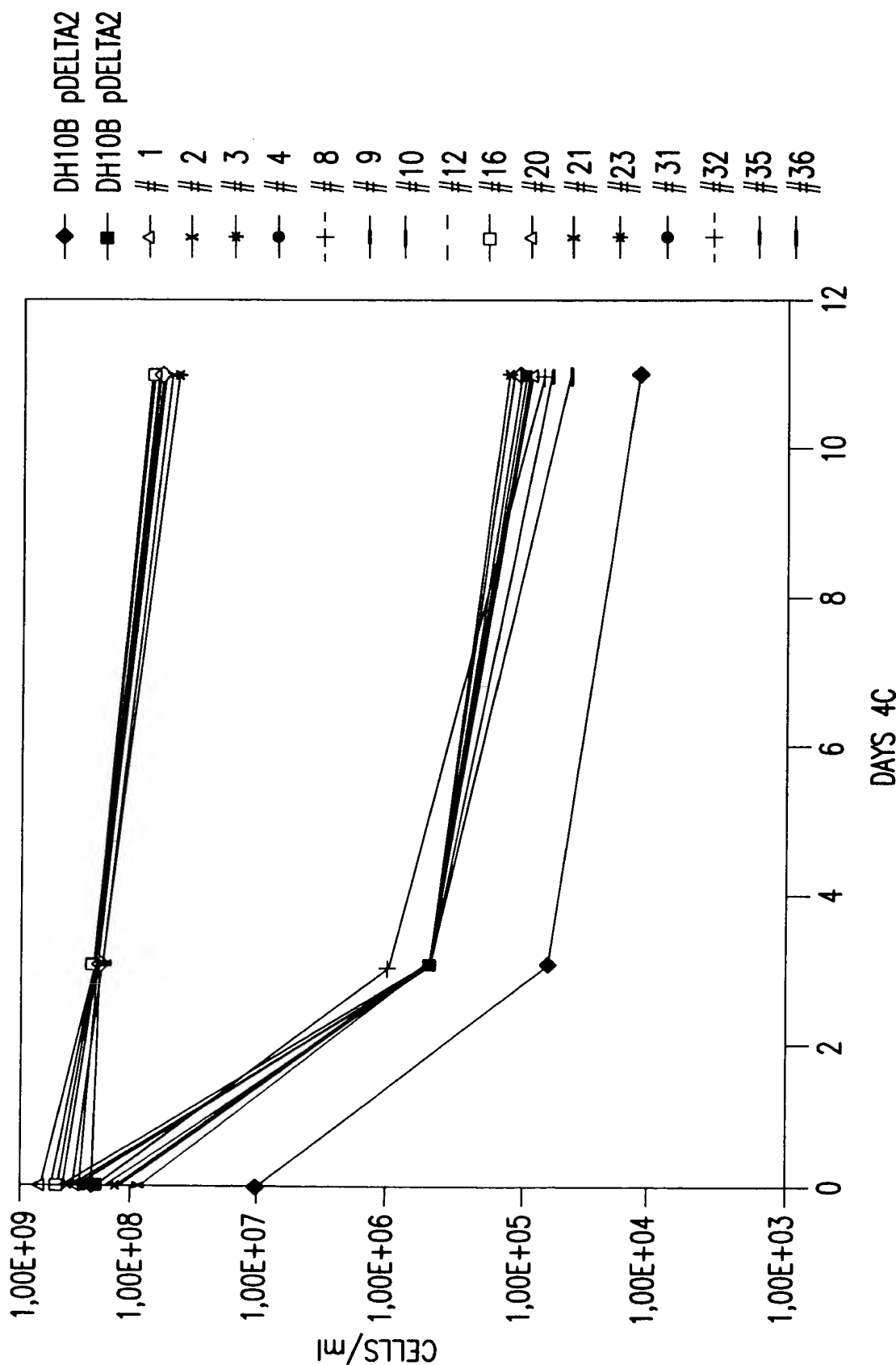


FIG.11

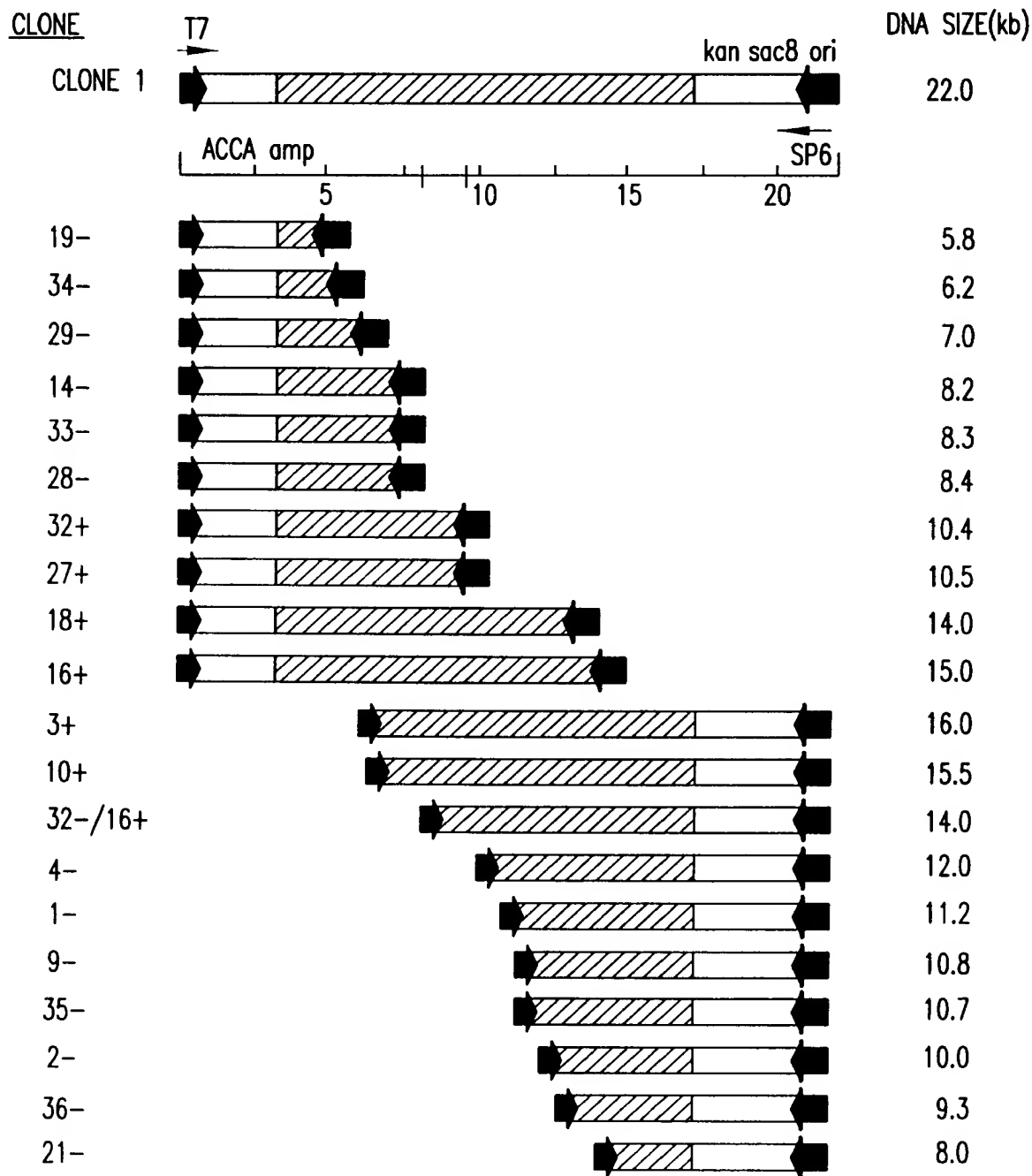


FIG.12



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CGTAGNTTTCGTTNCATTGGCCCTCAAACCCCTAATAGCGCCAGCGACAA 50  
CAACGCGCTGGCAATACCACCGCCGATAATCGCCGCTTCCCGTTTGCTGC 100  
TGCCCGTGCGGTAAACCACGGCGCGGAGCAGGGGAGCGGTAATGTCTGT 150  
TCCATCACCCCGCAAAGCATTTCGCGTTTGGCGCCAAAGCCCTTACGTTT 200  
TTGCATCGTGAATCCGGCGTCCTGCAAACCGCGGCGGACAAAACCGGCAG 250  
ACGTAAATGTCGCCAGCGTGCCGCCCGGACGCGCCAACCTTGCCATGGCG 300  
TTAAACAGATTTTTCGTCCACATATCCGGGTTTTTCGCTGGCGCAAAGCC 350  
GTCCAGAAACCAGGCATCTACTTTTTGATTTAGCGAATCGTCCAGTTGGC 400  
TGGTCAGTTCGTTAATATCGCCAAACCATAAATCCAGCGTCACGCGGCCT 450  
TCATCGAGCAATAAACGATGGCAACCGGGCAAGGGCATTGGCCACTGCGC 500  
CTGAAGTTGTTCTGCCCACGGAGCCAGTTCCGGCCAGTGTTGATGCGCTA 550  
AGGCTAAATCCGCACGGGTGAGGGGAAATTTCTCAAACTAATGAAATGT 600  
AAGCGTTGTAATTGCGCTTGCGGATGCGCTTCGCGAAACTGATCAAATGC 650  
CTGCCATAGCGTCAGGAAGTTTAATCCGGTGCCGAAGCCGCTCTCTGCTA 700  
CCACAAACAGAGGATGTGGATGCTCAGGAAAGCGTACCTCTAATTGGTTG 750  
CCTCCCAGAAAAACATAACGCGTCTCTTCCAGCCCGTTATCGTTGGAAAA 800  
ATAGACATCGTCAAAATCTCGGGAAACAGGTGTACCCTCAGCATTAAATT 850  
CGAGGTTGGCAGGTTGTATGGAGTAGTGTTTCACGTAAGTTACTCGTCTT 900  
ACAGGCGGTGGCTCGATCTTAGCGATGTGTGTAAGGCTGCGCAAATTTCT 950  
CTATTAAATGGCTGATCGGACTTGTTCCGGCTACAAGTGACGCTATTGT 1000  
GCATTCGAAACTTACTCTATGTGCGACTTACAGAGGTATTGAATGAAACG 1050  
TGCAGTGATTACTGGCCTGGGCATTGTTTCCAGCATCGGTAATAACCAGC 1100  
AGGAAGTCCTGGCATCTCTGCGTGAAGGACGTTTCAGGGATCACTTTCTCT 1150  
CAGGAGCTGAAGGATTCCGGCATGCGTAGCCACGTCTGGGGCAACGTAAA 1200  
ACTGGATACCACTGGCCTCATTGACCGCAAAGTTGTGCGCTTTATGAGCG 1250

FIG. 13A



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ACGCATCCATTTATGCATTCTTTCTATGGAGCAGGCAATCGCTGATGCG 1300  
GGCCTCTCTCCGGAAGCTTACCAGAATAACCCGCGCGTTGGCCTGATTGC 1350  
AGGTTCCGGCGGGCGGCTCCCCGCGTTTCCAGGTGTTCCGGCGCTGACGCAA 1400  
TGCGCGGGCCCGCGCGGCTGAAAGCGGTTGGCCCGTATGTGGTCACCAAA 1450  
GCGATGGCATCCGGCGTTTCTGCCTGCCTCGCCACCCCGTTTAAATTC 1500  
TGGCGTTAACTACTCCATCAGCTCCGCGTGTGCGACTTCCGCACACTGTA 1550  
TCGGTAACGCAGTAGAGCAGATCCAACGGGCAAACAGGACATCGTGTTT 1600  
GCTGGCGGGCGGCGAAGAGCTGTGCTGGGAAATGGCTTGCGAATTCGACGC 1650  
AATGGGTGCGCTGTCTACTAAATACAACGACACCCCGGAAAAAGCCTCCC 1700  
GTACTTACGACGCTCACCGTGACGGTTTCGTTATCGCTGGCGGGCGCGGT 1750  
ATGGTAGTGTTGAAGAGCTGGAACACGCGCTGGCGCGTGGTGCTCACAT 1800  
CTATGCTGAAATCGTTGGCTACGGCGCAACCTCTGATGGTGACAGACATGG 1850  
TTGCTCCGTCTGGCGAAGGCGCAGTACGCTGCATGAAGATGGCGATGCAT 1900  
GGCGTTGATACCCCAATCGATTACCTGAACTCCACGGTACTTCGACTCC 1950  
GGTTGGCGACGTGAAAGAGCTGGCAGCTATCCGTGAAGTGTTCCGGCGATA 2000  
AGAGCCCGGCGATTTCTGCAACCAAAGCCATGACCGGTCACTCTCTGGGC 2050  
GCTGCTGGCGTACAGGAAGCTATCTACTCTCTGCTGATGCTGGAACACGG 2100  
CTTTATCGCCCCGAGCATCAACATTGAAGAGCTGGACGAGCAGGCTGCGG 2150  
GTCTGAACATCGTGACCGAAACGACCGATCGCGAACTGACCACCGTTATG 2200  
TCTAACAGCTTCGGCTTCGGCGGCACCAACGCCACGCTGGTAATGCGCAA 2250  
GCTGAAAGATTAATTGCGAGTAGGTGCGAGTAGACGCGCCAGCCTCGCAT 2300  
CCGACGTTACGCGCCAATGCGGCCTCCGGCACTAACGCAAAGGGAACCT 2350  
GATGGTTCCCTTTTTCACATCATTGACAATCGCCGCCAGTTCCAGGCAAA 2400  
CTTCCCGCTTTGTGATTTCTTCTGAAAAGACGTACGCGTTAAATCCTG 2450  
CCAACGCACCGTAACCCTGAAACCAGAGAGATGAGACGGGGATACTCCTC 2500

**FIG. 13B**





Sheet 17 of 32

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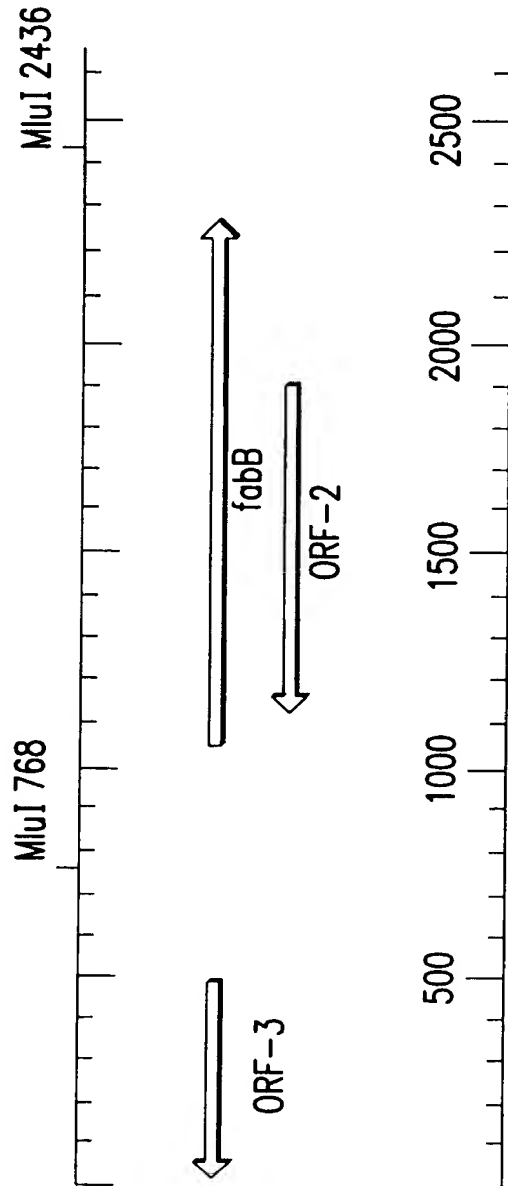
GCCTTGCGCTGCATTCTGGAGTAATGCATGACTGCTGTAAGCCAAACCGA	2550
AACACGATCTTTCTGCCAATTTTTCGCTYTTTCCGCATCGCTTTTTCGGG	2600
TTTTTCTTCACCTACATGACCCGTAGGGTTGCCGTTGCCGGTTATCCCGC	2650
TGTTTGTT	2658

FIG.13C



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090396FA.SEQ (2658 bps)

FIG.14



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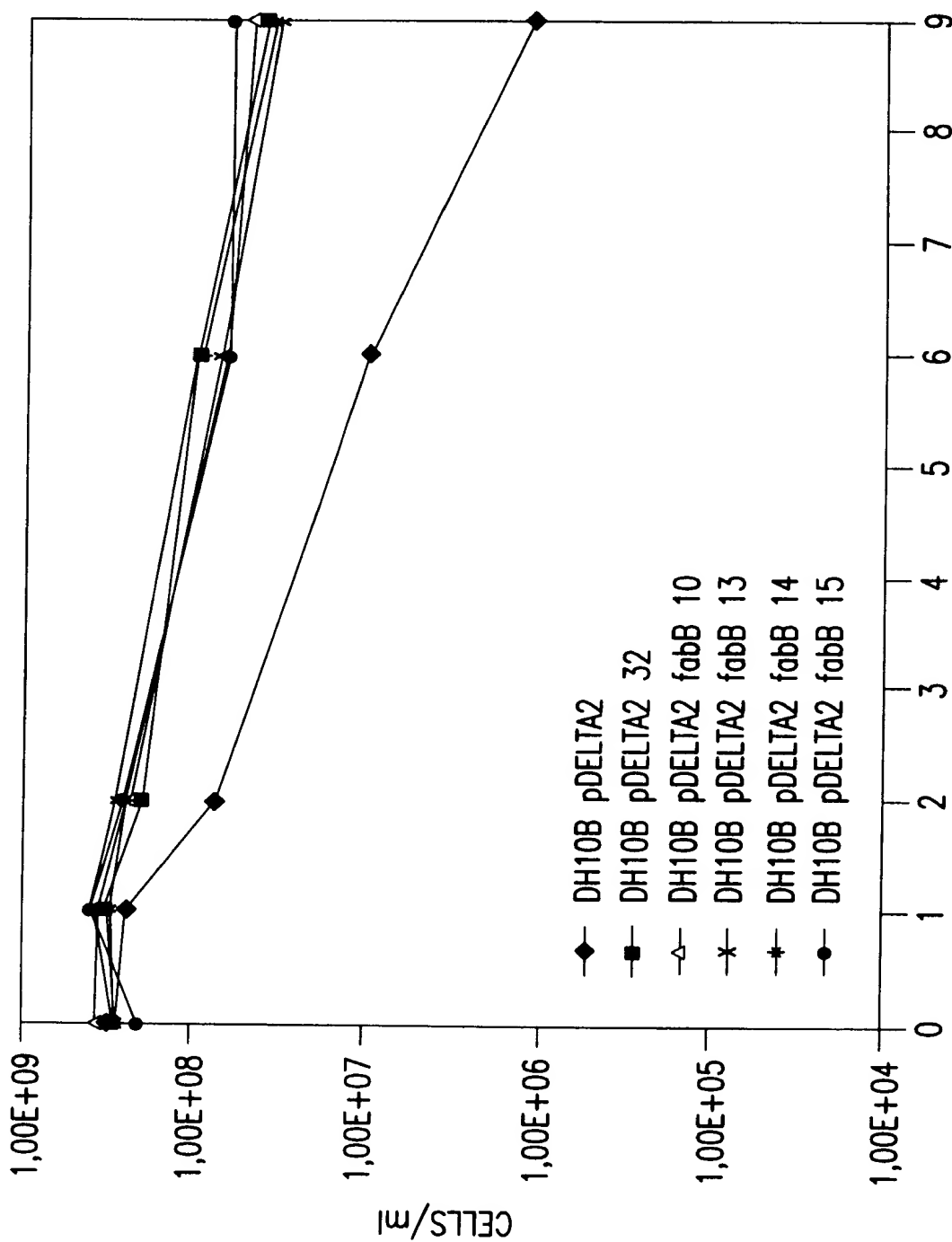


FIG. 15



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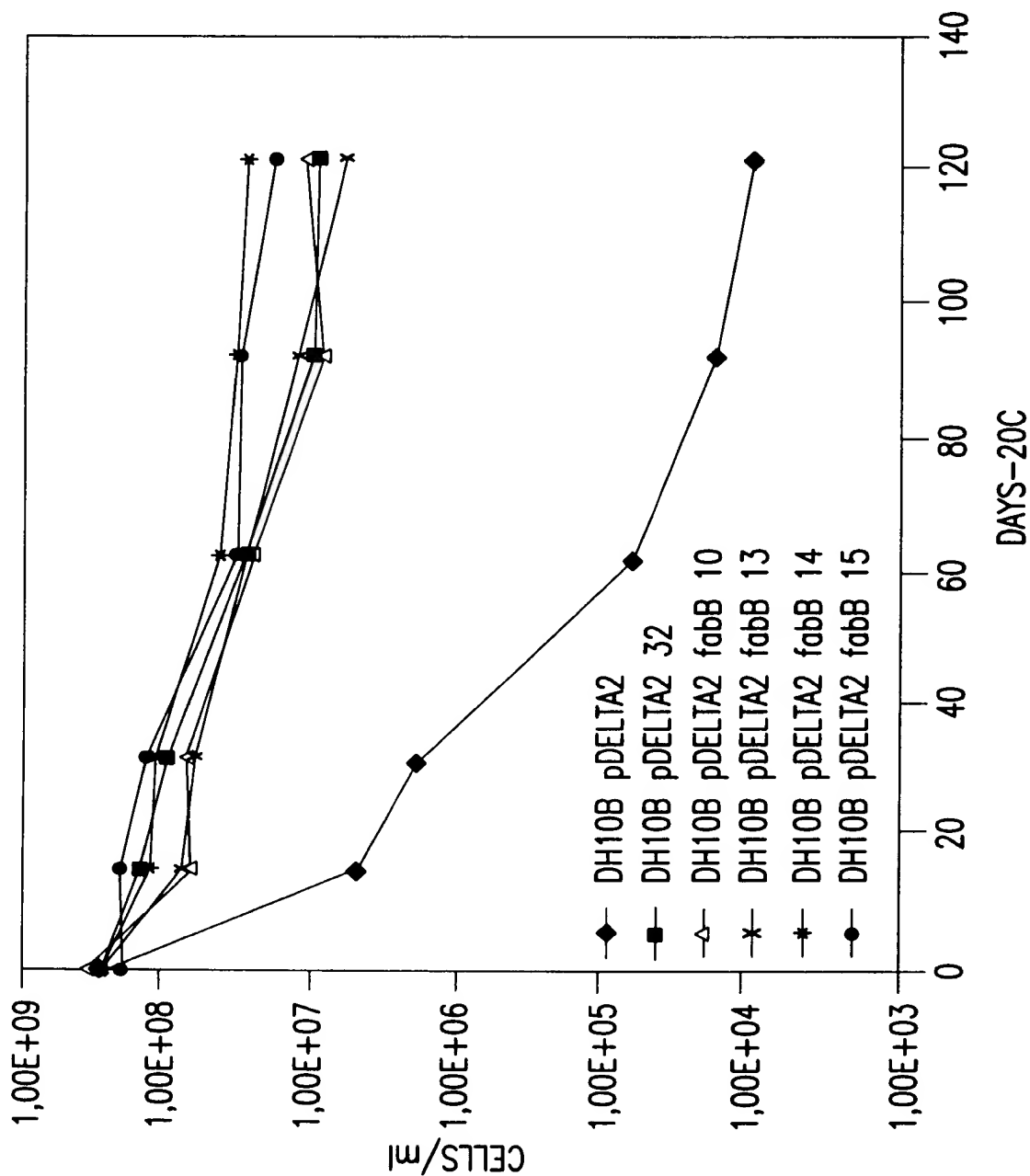


FIG.16



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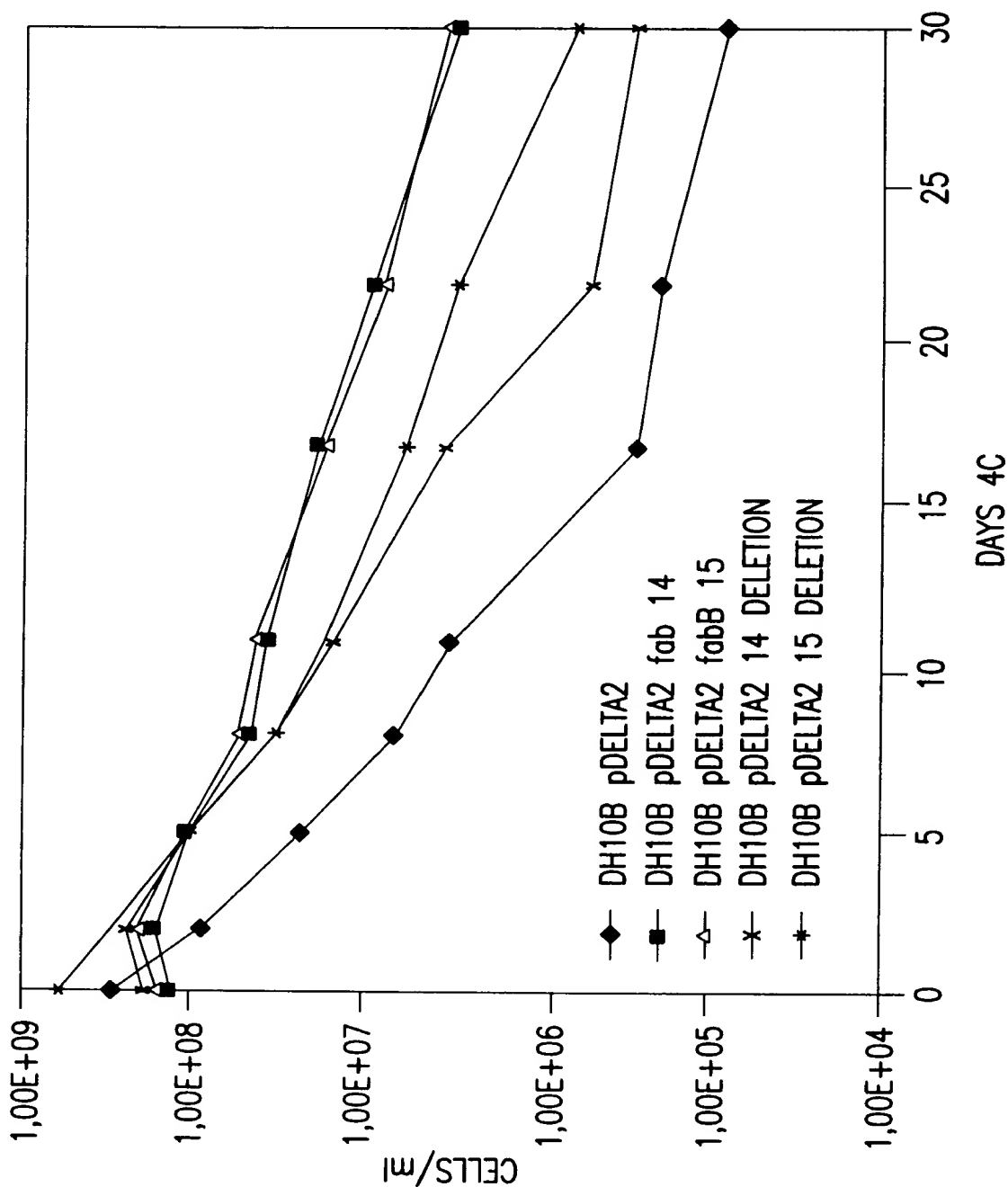


FIG.17

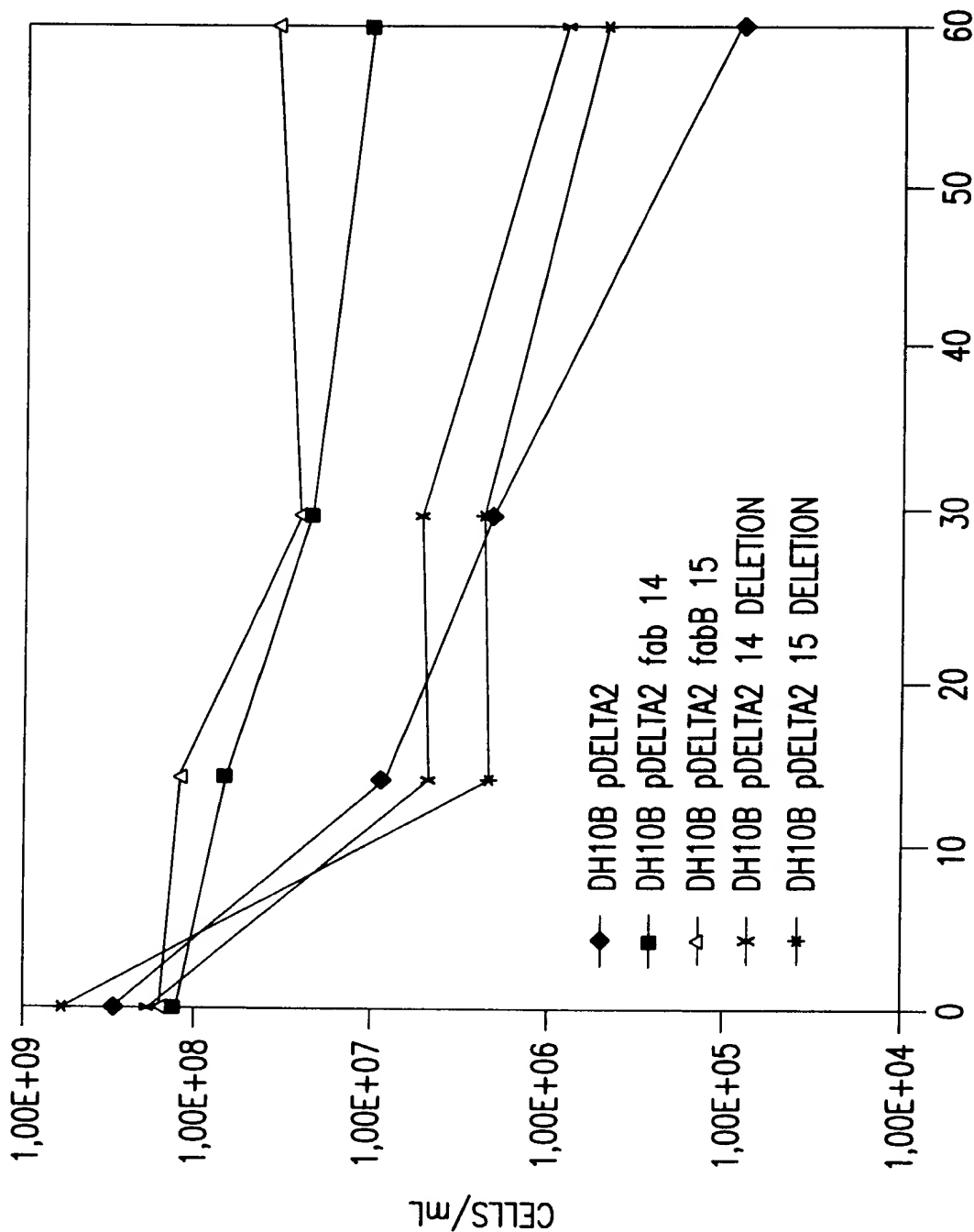


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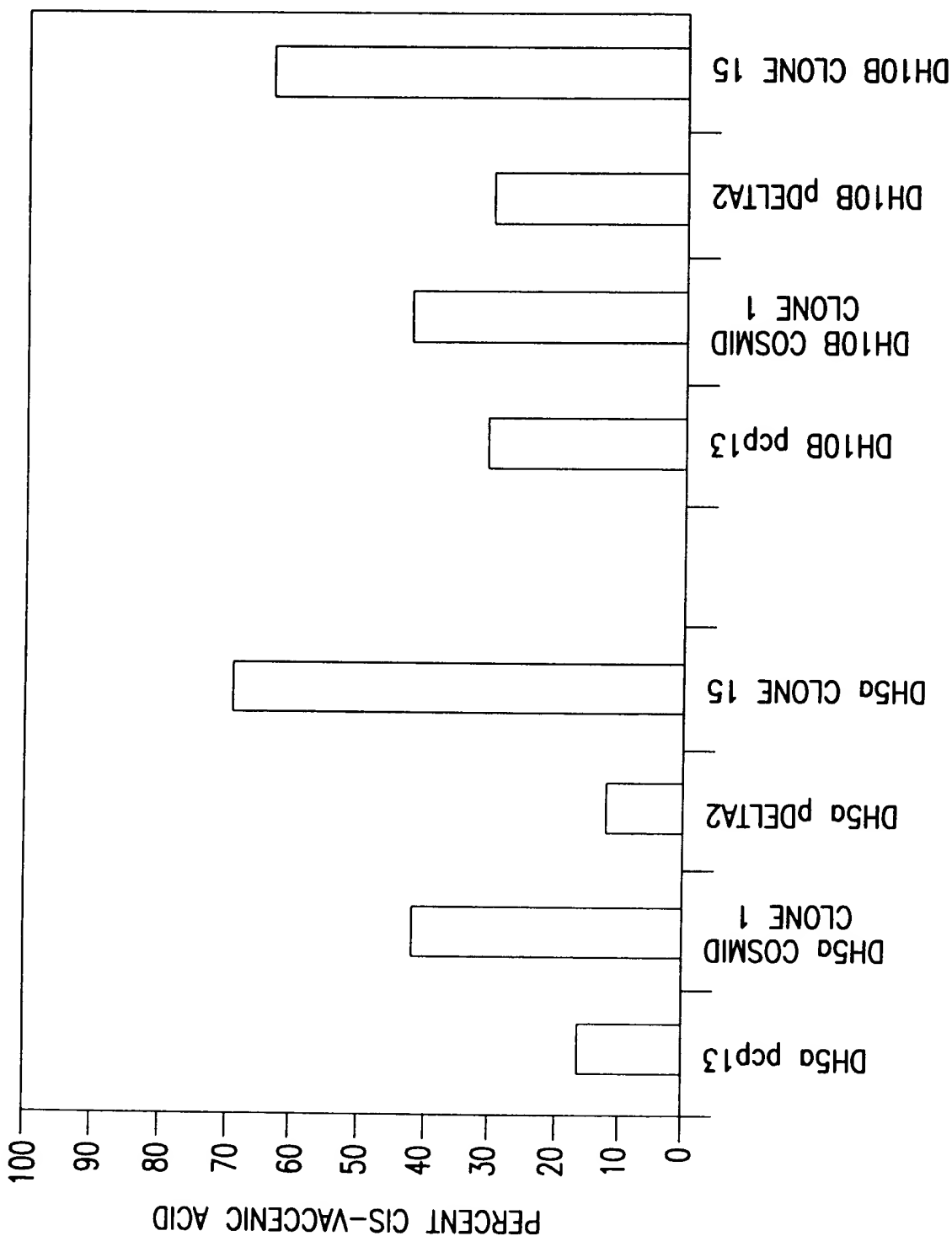


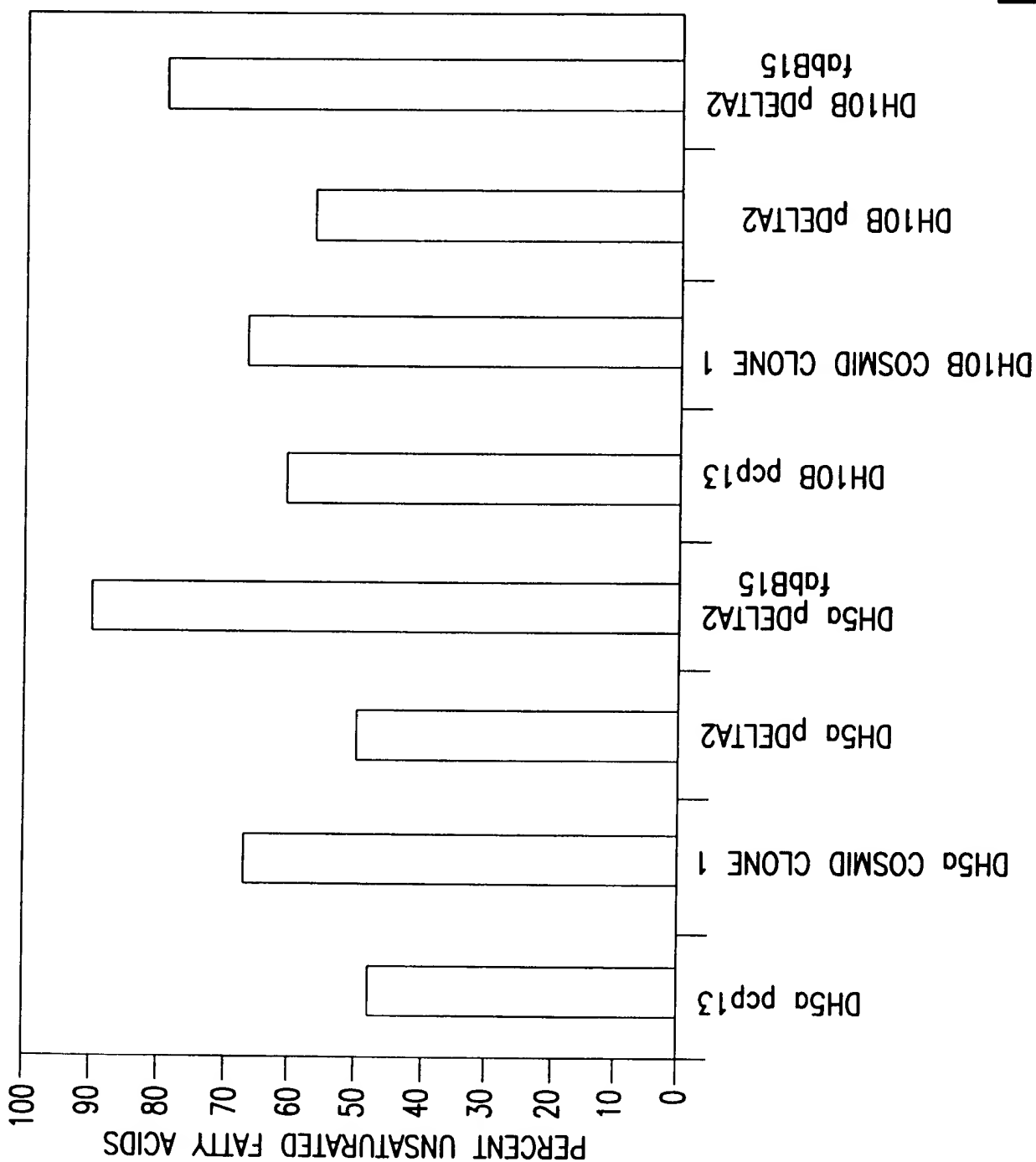
FIG.19



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FIG. 20







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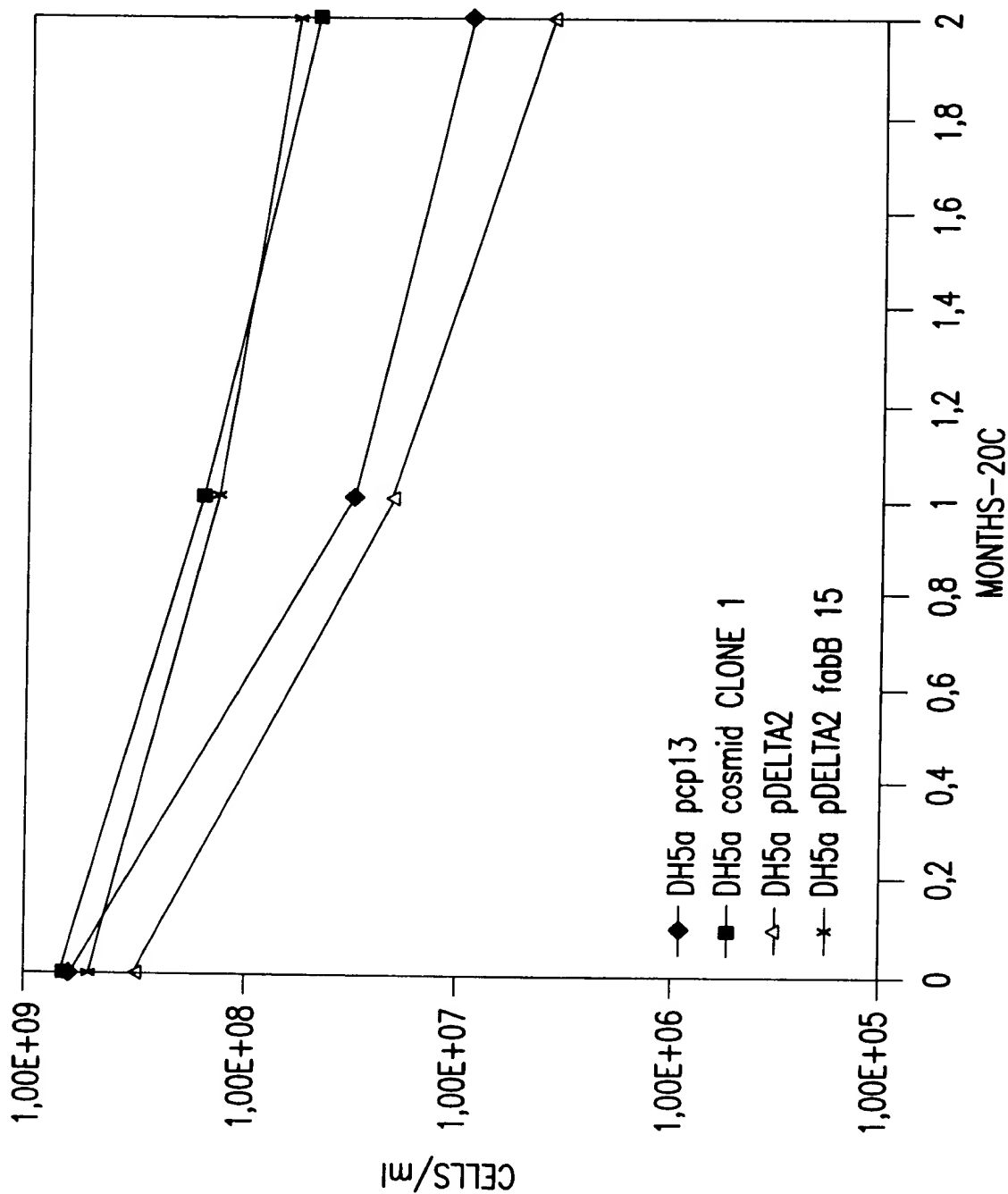


FIG.21



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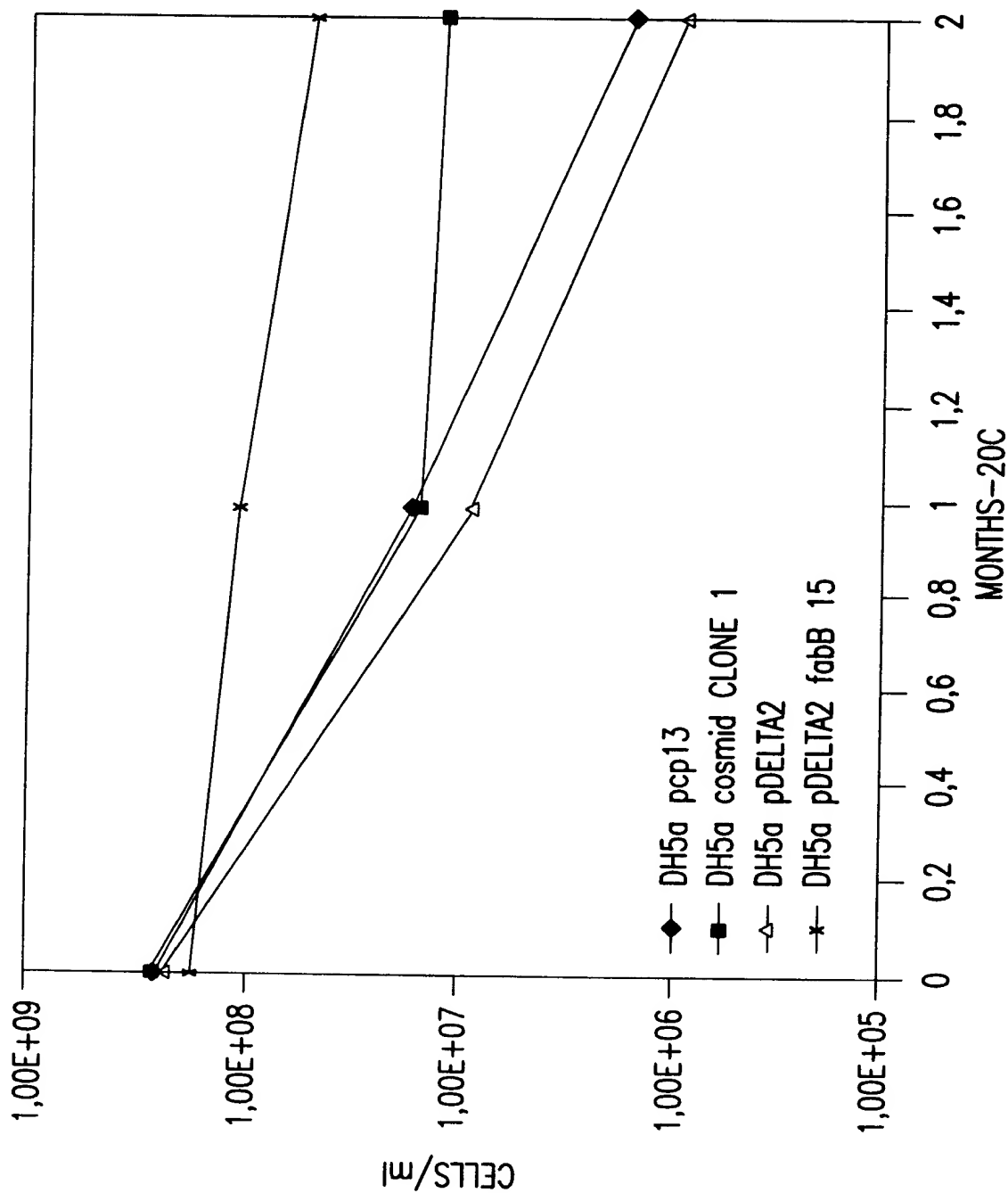


FIG.22



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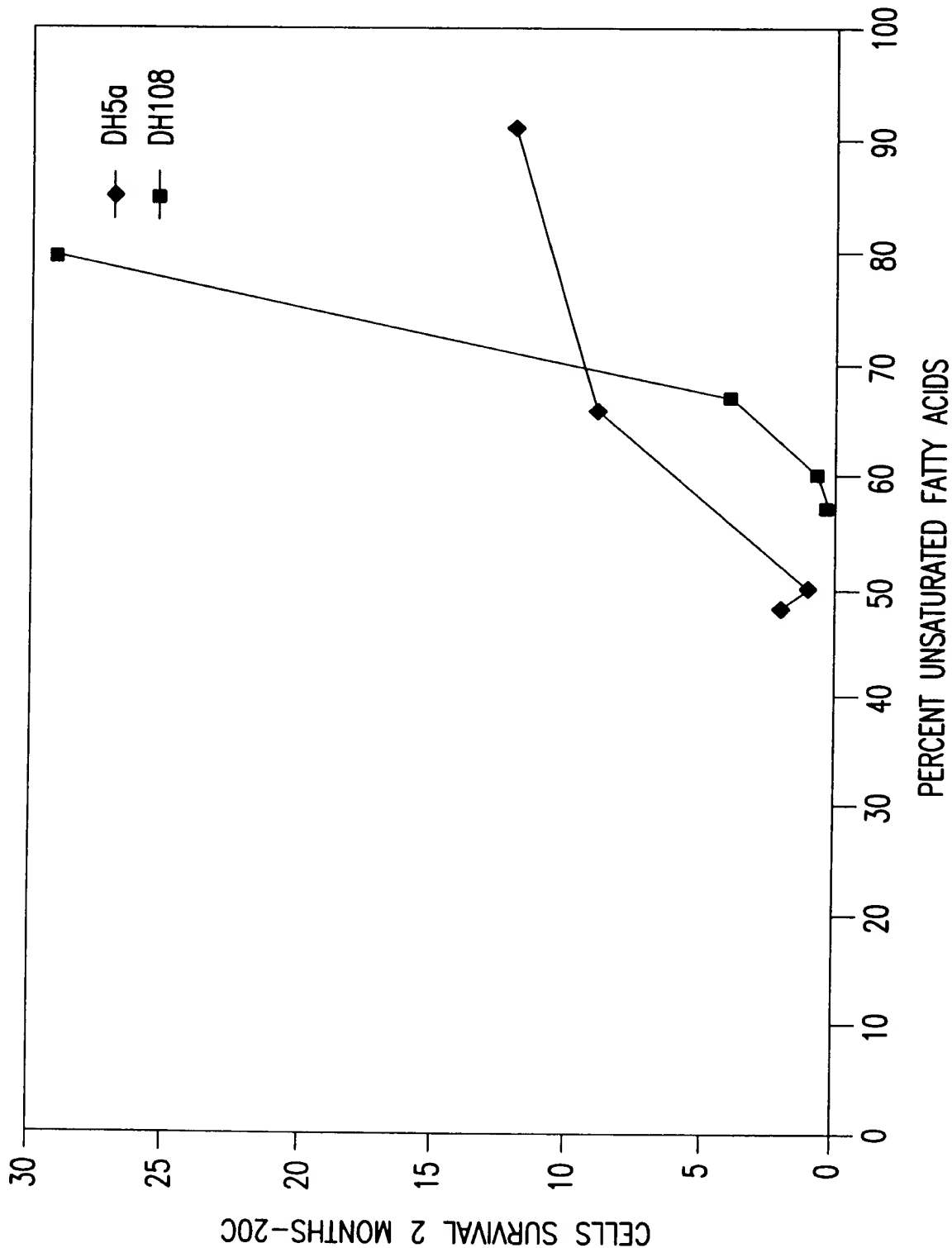
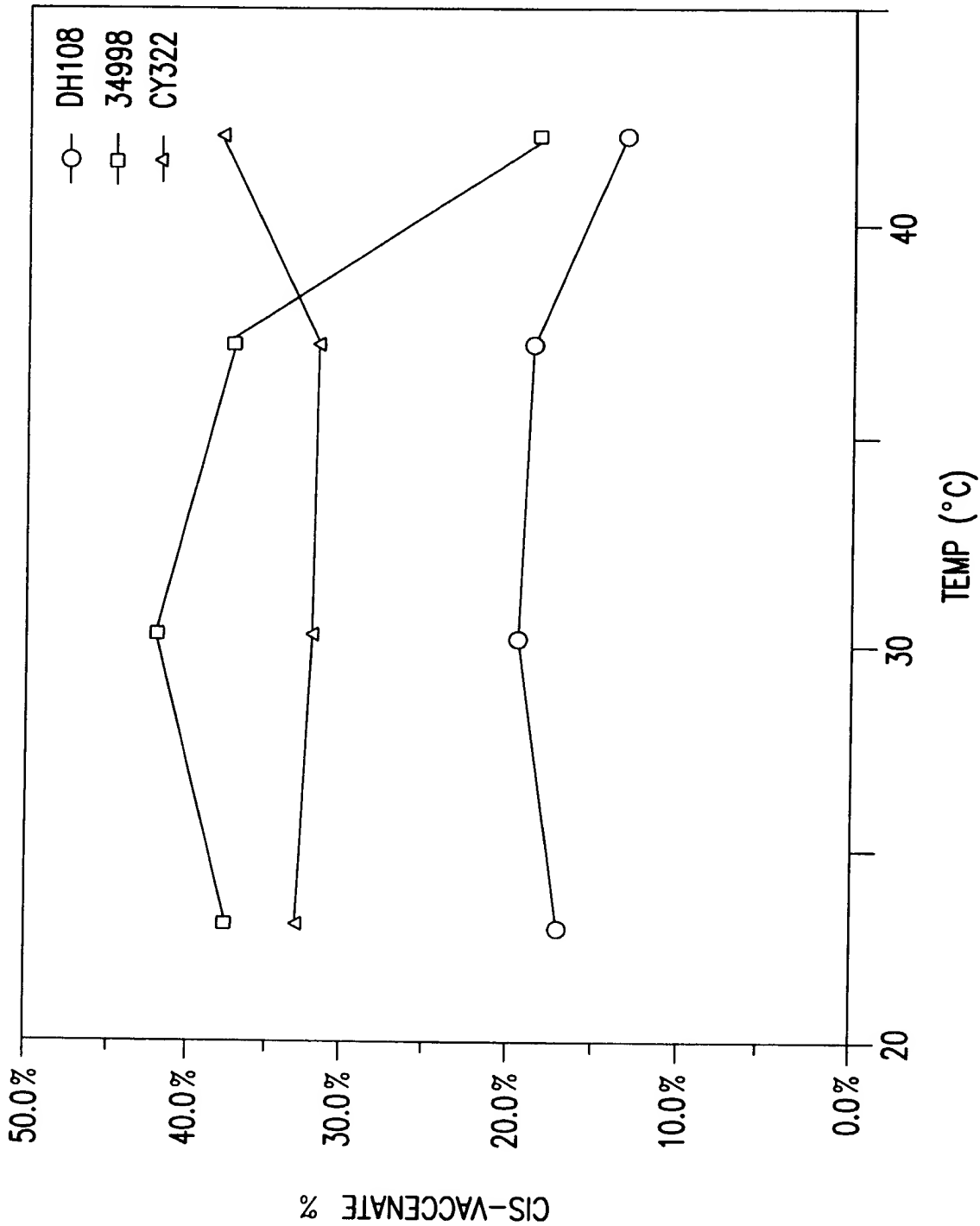


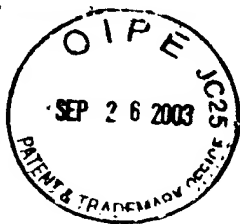
FIG.23



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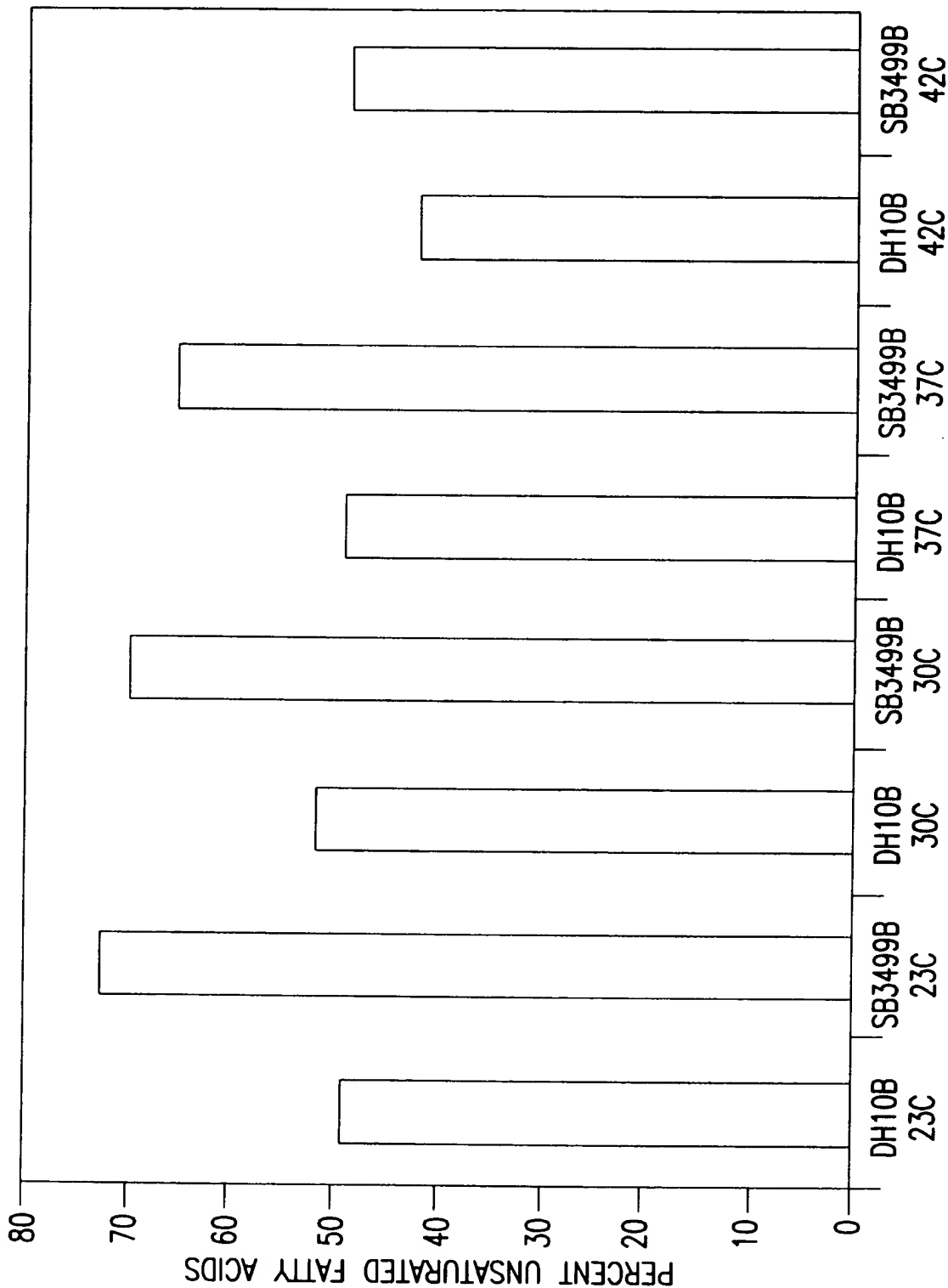
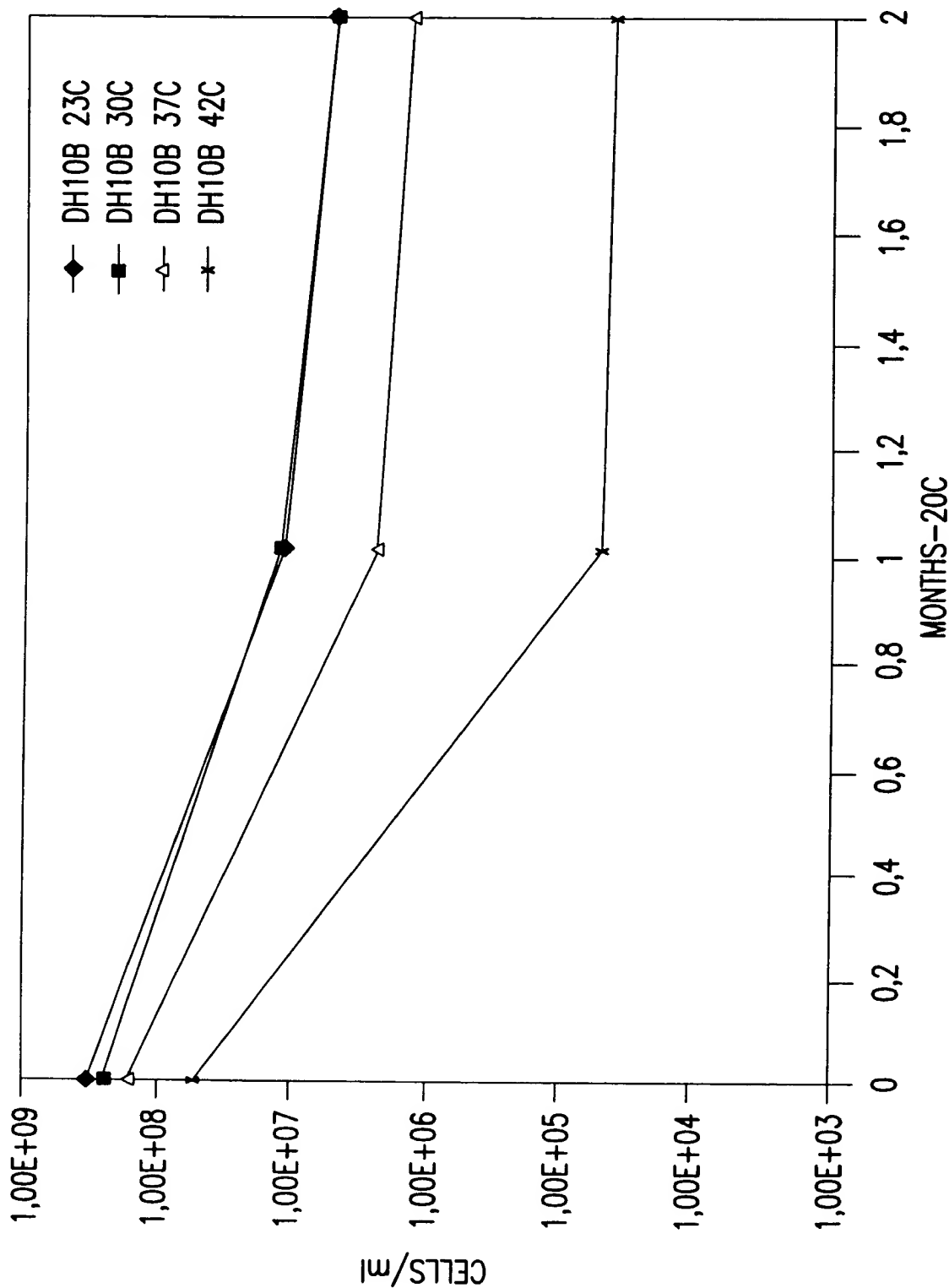


FIG.25



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FIG.26



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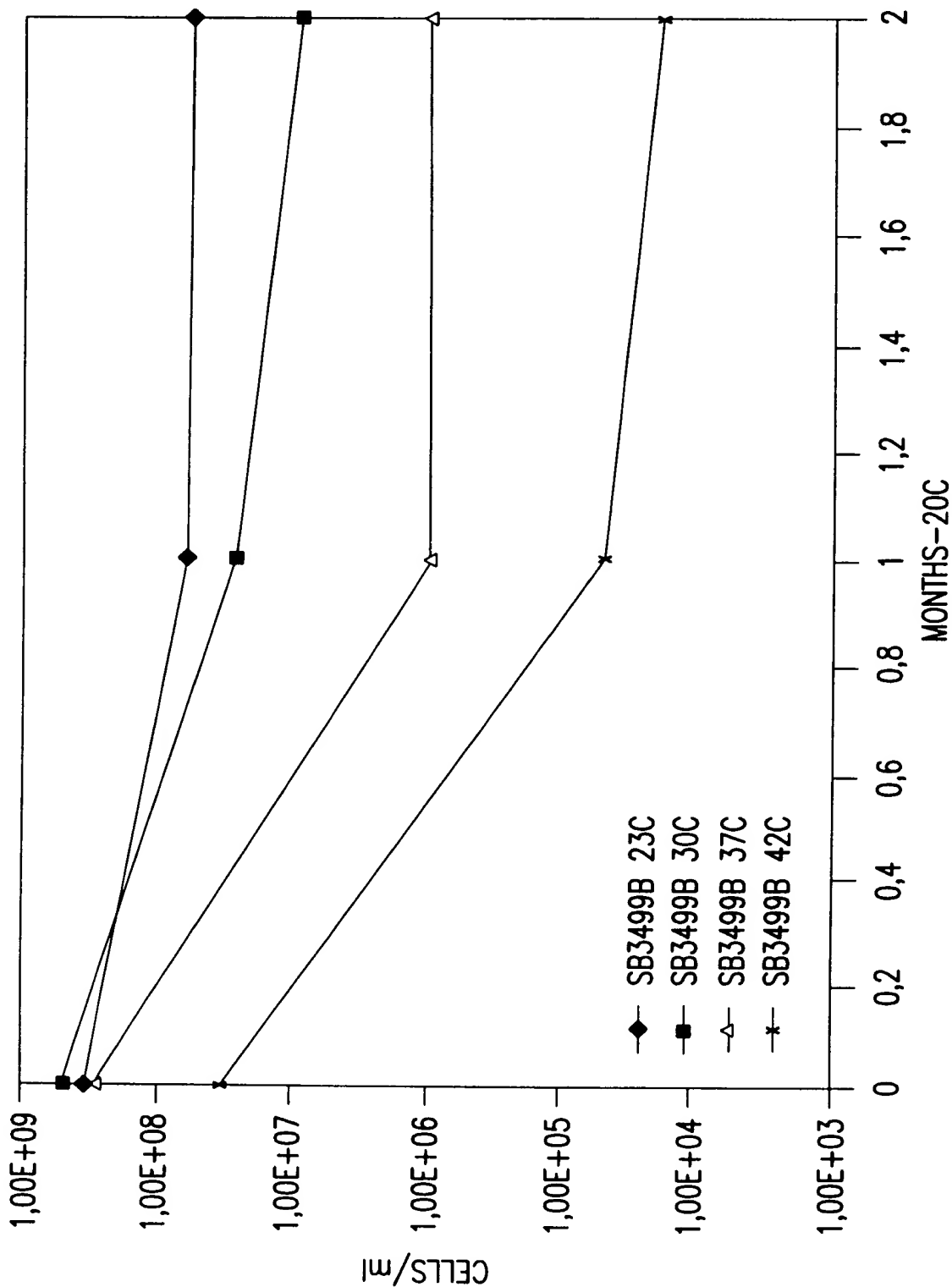


FIG.27



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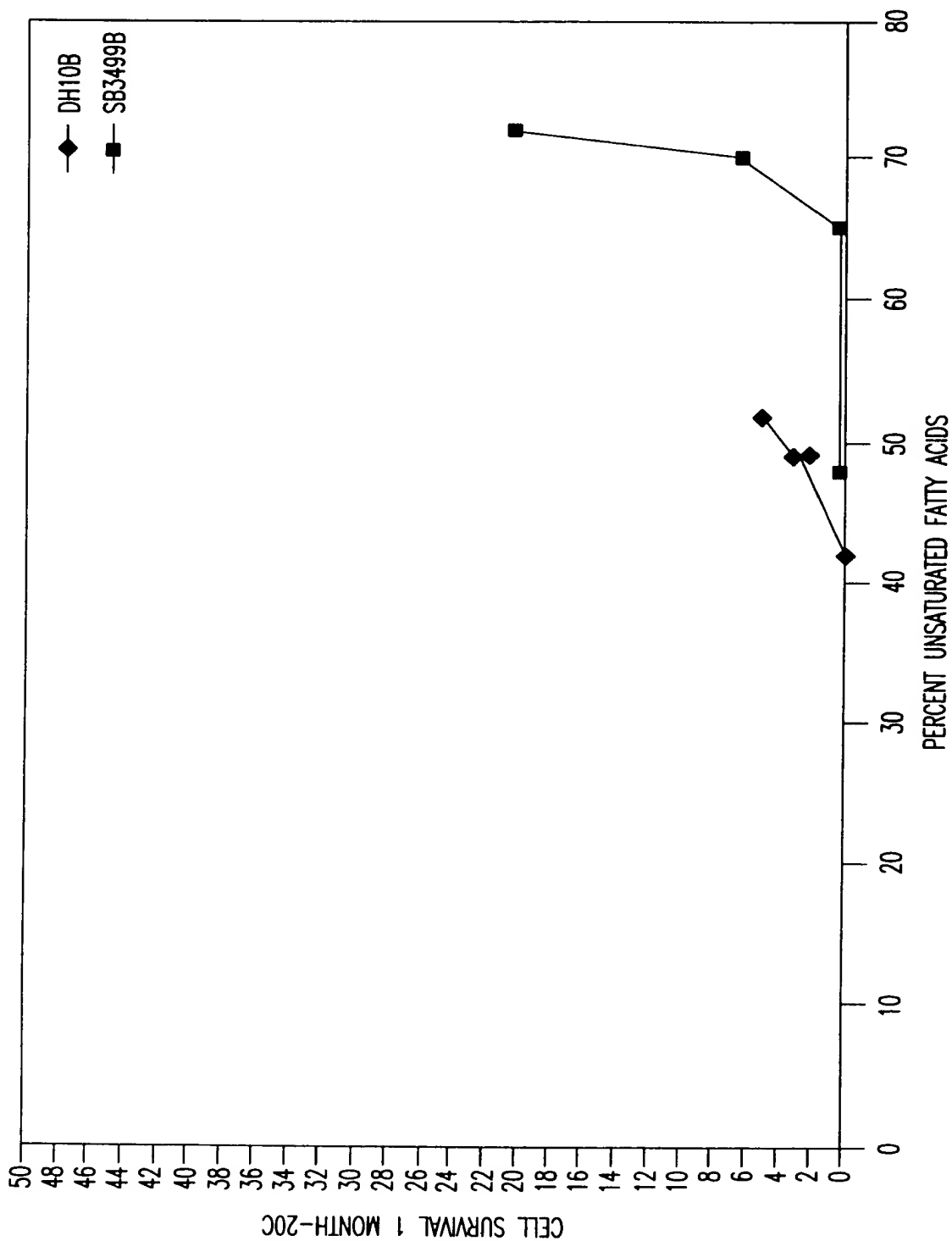


FIG.28